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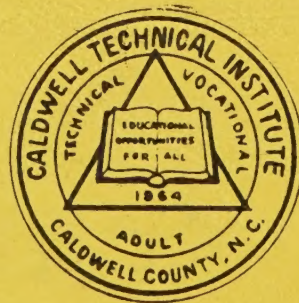
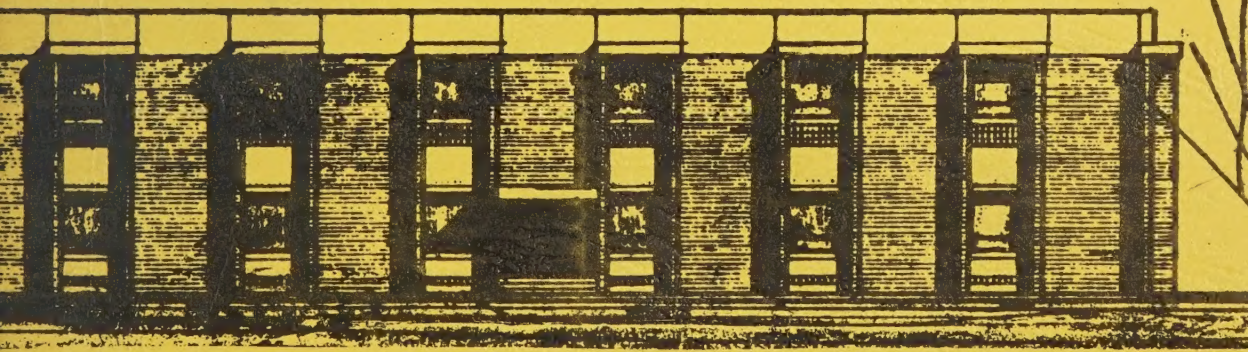


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# CALDWELL

## TECHNICAL INSTITUTE



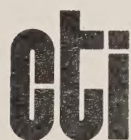
INTRODUCTORY  
**BULLETIN**  
**1966**

8



# CALDWELL TECHNICAL INSTITUTE

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INTRODUCTORY  
**BULLETIN**  
**1966**

Offset Press Print by  
CALDWELL TECHNICAL INSTITUTE

December, 1965

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C378  
C147H

## FOREWORD

The Caldwell Technical Institute was founded upon the premise that it should become a "community school", offering programs at all levels to the extent of its legal authority, to all races, and to both sexes.

This commitment is being carried out and planned for through adult basic education courses for those who have not learned to read and write or who did not complete the eighth grade, through courses designed to help persons who did not graduate from high school prepare themselves to take the high school equivalency exam, through courses and workshops designed to enable persons to live a fuller life and to solve problems that confront them, through extension courses designed for employed persons to improve their skills while continuing their employment, and through curriculum programs announced in this catalog which are designed to prepare persons for initial employment.

The announcements herein result from our commitment as a "community school," for hundreds of lay and professional citizens in Caldwell County have helped to analyze our needs and to design courses and programs to meet them.

This is an "Introductory Catalog" designed to help you decide whether Caldwell Technical Institute might be a good place for you to further your education and develop certain skills. A more formal printed catalog will be available later. Please let us know of additional information you need in order to make intelligent decisions concerning our offerings.

It is our purpose to provide the highest quality programs possible at a cost which our citizens can afford.

H. Edwin Beam  
President

8/15/80

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ACADEMIC CALENDAR

1966 - 1967

Fall Quarter

1966

September 6 and 7- - - - -Registration  
September 8 - - - - -Classes Begin  
November 23 - - - - -Fall Quarter Ends  
Thanksgiving Holidays - November 24 and 25

Winter Quarter

1966

November 28 and 29 - - - - -Registration  
November 30 - - - - -Classes Begin  
February 24 - - - - -Classes End  
Christmas Holidays - December 21 - January 1, 1967

Spring Quarter

1967

March 1 and 2 - - - - -Registration  
March 6 - - - - -Classes Begin  
May 23 - - - - -Classes End  
Easter Holidays ---Friday, March 24  
Easter Monday, March 27

Summer Quarter

1967

June 5 and 6 - - - - -Registration  
June 7 - - - - -Classes Begin  
August 23- - - - -Classes End  
Holiday-----July 4

## GENERAL INFORMATION

### History

Several historical events are important in the development of the Caldwell Technical Institute.

The 1963 North Carolina General Assembly passed the Community College Act creating a system of comprehensive community colleges, technical institutes, and industrial education centers in the State under the State Board of Education.

In January, 1964, the Caldwell Technical Institute was tentatively approved by the State Board of Education. On March 28, 1964, the people of Caldwell County approved the institution through a bond note of \$600,000 for the purchase of the site and construction of the facilities and up to 5 cents tax authorization for operating the institution. Final approval by the State Board of Education followed on April 2, 1964.

The president was selected in October, 1964. The site was selected in January, 1965. Selection of the architect was made in February, 1965.

### Location

The Caldwell Technical Institute is to be located on Highway 321, approximately five miles south of Smith's Crossroads. The Institute property adjoins the Hudson High School property.

Since the Institute buildings will not be ready for occupancy by September, 1966, classes will begin in temporary quarters.

## AREAS OF STUDY

### Technical Curricula

All technical curricula operate on a full-time two year program basis. These programs emphasize theory more heavily than do vocational programs and consist of highly specialized occupational areas.

Technical curricula expected to be offered by the Caldwell Technical Institute for the 1966-1967 Academic year include:

Business Administration	Furniture Drafting and Design
Executive Secretary	Library Assistant
Medical Secretary	

Graduates of these programs will be awarded the Associate in Applied Science Degree.

### Vocational Curricula

Vocational programs are generally for one year or less in duration. Emphasis is given to specific manipulative skills or application of understanding. Some knowledge of mathematics, the sciences, and communicative skills is also required.

Examples of vocational programs expected to be offered by The Caldwell Technical Institute for the 1966-1967 Academic year include:

Automotive Mechanics	Furniture Drafting
Carpentry	Maintenance Mechanic
Cosmetology	Masonry
Electrical-Electronic	Practical Nurse Education
Drafting	Production Assistant (Furniture)
Electrical Installation	Welding
and Maintenance	

Graduates of these programs will be awarded a diploma by The Caldwell Technical Institute.

## AREAS OF STUDY - NON-CURRICULUM OFFERINGS

### Extension Offerings

The Caidwell Technical Institute will offer annually a number of courses by extension for those persons who are employed, and who wish to upgrade their occupational levels.

Extension courses will be offered in the late afternoons and evenings, and may be offered in certain surrounding communities as well as on the campus.

Many of the extension courses will be the same general nature as those included in the one and two-year curriculum programs. Others will be for specific purposes of pre-employment or upgrading training to meet needs not necessarily met through curricular offerings.

Extension courses will be announced well in advance of the beginning dates.

Examples of extension offerings of a non-curriculum nature which could be offered include:

Creative Salesmanship	Firemanship Training
Advertising	(Series of Courses)
Personality Development	Nurses' Assistant Training
Accounting	Oral Communications
Bookkeeping	Principles of Supervision
Business Machine Operation	(Series of Courses)
Rapid Writing	Job Instruction Training
Principles of Management	Industrial Psychology
(Series of Courses)	Small Appliance Servicing and Repair

A certificate will be awarded for the satisfactory completion of each course offered by extension.

## General Adult Education and Community Service Programs

Adult and community services programs will normally consist of non-credit courses that lead to no degree or diploma. However, a certificate will be awarded for the satisfactory completion of each adult or community service program.

Examples of types of offerings in this category follow:

Social Security	Public Speaking
Law for the Layman	Rapid Reading
Personal Income Tax	Personal Typing
Personal Investments	Business Law
Interior Decoration	Discussion Groups:
Home Appliance Repair	Great Decisions
Preschool Problems	Great Books
Human Relations	You and Your Community
North Carolina History	Aging and You
First Aid	World Politics

## Adult Basic Education

Adult basic education programs are designed for adults who did not go to school, or who dropped out before completing the eighth grade.

Classes are offered on the 0-4 level and on the 5-8 level. Approximately 150 class hours (or six months) is required to complete each level.

## Adult Education High School Diploma Program

The adult high school diploma program is a cooperative program between local school administrative units and the Caldwell Technical Institute to provide the necessary instruction which will enable the adult student to complete the requirements for an adult high school diploma.

The curriculum includes classes in English, mathematics, science, and social studies.

## Other

Cultural events of various kinds will be sponsored by the Caldwell Technical Institute each year. These will be announced well in advance, open to the public, and generally free of charge. Certain types of events may, however, require charging a nominal admission fee.

## ADMISSIONS

### Admission Requirements

The Caldwell Technical Institute is a co-educational institution open to any individual meeting the admission requirements for the particular course or area in which he wishes to enroll. These requirements vary with the areas of study offered by the Institute.

All applicants for the technical curriculum must be high school graduates, or be eighteen years of age or older and possess a high school equivalency certificate. The applicant must have satisfactorily completed at least two years of high school mathematics, preferably one year of algebra and one year of geometry. Physics and chemistry are also desirable courses for the technical program applicant to have completed.

Applicants for the vocational curriculum programs should also be high school graduates or equivalent; however, an applicant may be accepted in a vocational curriculum who possesses maturity, mental growth, attitudes, aptitudes, and interests necessary for success in the particular curriculum for which he is applying.

### Admission Procedure (For One and Two-Year Programs)

1. Secure application form and make application for admission. Application forms may be secured from your

local guidance counselor by writing the Caldwell Technical Institute, Box 600, Lenoir, North Carolina, or by calling telephone number 758-2306 in Lenoir. The application for admission should be very carefully and accurately completed and submitted to the Institute as early as possible to assure a place in the curriculum desired. Enrollment limits are set for almost all curriculum offerings.

2. Submit the completed application. There is no fee to be submitted with the application. A \$2.00 registration fee will be collected when registering.

3. Submit a transcript of high school records and of any post-high school work taken. These may be submitted at any time during the senior year in high school (if the applicant is still attending high school). An applicant meeting all other requirements will be given provisional acceptance pending receipt of his final grades from high school.

4. Complete the General Aptitude Test Battery given by the North Carolina Employment Security Commission. These tests are a requirement for admission to any institution under the North Carolina Department of Community Colleges. There is an Employment Security Commission in Lenoir where these tests may be taken.

5. Arrange for an interview with the Director of Student Personnel or other representative of the Caldwell Technical Institute. The interview is a requirement for completing the application process. The applicant may arrange for the interview through his guidance counselor, or by calling the Director of Student Personnel at 758-2306 in Lenoir. The interview may be arranged in the local school or in the Institute office in Cornelius Hall on the campus of Davenport Junior High School in Lenoir.

## Admission With Advanced Standing

Students may be admitted with advanced standing by transfer from other technical institutes, colleges, or universities. Credits transferred from another institution must be of "C" grade quality or higher, and parallel closely those offered by the Caldwell Technical Institute for the program in which the applicant desires advanced standing.

An official transcript must be submitted at least two weeks prior to registration day in order for advanced standing to be allowed.

Certain students may by reason of work experience or special high school preparation be allowed to take certain advanced courses instead of beginning at a lower level. These cases will be determined individually, and usually on the basis of a proficiency exam. Examples of this might be the applicant with typing and shorthand credits from high school. Elective courses will be chosen by the student to equal the number of credit hours omitted.

### Expenses

(For one and two-year programs)

#### Registration Fee

A registration fee of \$2.00 is required of all students at the beginning of each school year.

#### Tuition

Full-time students will pay tuition of \$30.00 per quarter. This will be due on the registration date for each quarter. Part-time students will pay tuition fees of \$2.00 for each credit hour of work taken. Students whose legal residence is outside of the State of North Carolina will pay registration and tuition fees two-and-a-half times the above rates.

## Books and Supplies

A student is required to buy the necessary textbooks and supplies prescribed in the curriculum area he is entering. These vary widely according to curriculum.

## Other Fees

All students are urged to carry the group insurance available at the Institute for approximately \$2.00 per year.

Students in the Cosmetology and Licensed Practical Nurse curriculums may be required to purchase their uniforms.

An activity fee of \$1.00 per quarter will be charged all students registered for curriculum programs.

Students may purchase year books if they desire.

A nominal fee is charged for a cap and gown at graduation.

## Refunds

Refunds for full-time students are made only when a student withdraws from the Technical Institute for unavoidable reasons. In such cases, \$20.00 may be refunded if withdrawal is completed within 20 calendar days from the beginning of the quarter. No refunds can be made after this time.

## ACADEMIC STANDING

### Grading System

Official grades are issued for each student at the end of each quarter. Students who lack passing averages at mid-quarter will be notified of this fact and should schedule a conference with the instructor and/or Director of Student Personnel.

Students enrolled in curriculum program courses will be graded by the letter-grade system shown below, and assigned a grade point equivalent in quality points for each quarter scheduled.

### Numerical

<u>Grade</u>	<u>Grade</u>	<u>Grade Point Equivalent</u>
93-100	A - Excellent	4 quality points each qtr. hr.
85- 92	B - Good	3 quality points each qtr. hr.
77- 84	C - Average	2 quality points each qtr. hr.
70- 76	D - Below Average	1 quality points each qtr. hr.
Below 70	F - Unsatisfactory	0 quality points each qtr. hr.
	Inc. - Indicates failure to complete certain course requirements because of extenuating circumstances. All incompletes must be removed before the end of the succeeding term or the grade becomes an automatic "F".	
	WP - Student dropped the course, but had a passing grade average at the point of withdrawal.	
	WF - Student dropped the course, and had a failing grade average at the point of withdrawal.	

### Withdrawals

Students who withdraw from the Institute during any quarter must first consult with the Director of Student Personnel, and then apply in writing for permission to withdraw. This protects the student's scholastic record, his right to re-enroll, and his right to transfer to another Technical Institute.

All school property assigned to the student must be accounted for at the time of withdrawal.

## Schedule Changes

Change of schedule after registration has been completed will be made only with permission of the Director of Student Personnel.

## Attendance

The nature of technical and vocational curricula makes it necessary that students attend all class sessions. Therefore, no system of "cuts" has been developed by the Institute. Students are expected to attend every class session unless personally ill or there are other unusual circumstances.

## Academic Probation

Students failing to maintain a 2.0 overall grade point equivalent average will be considered on academic probation, and may be required to modify his regular course load. A student may be asked to withdraw from a regular curriculum program if his grade point average drops below 1.0.

## Requirements for Graduation

A student is eligible for graduation when he has fulfilled the following requirements:

1. He has satisfactorily completed all the requirements of the curriculum in which he is enrolled.
2. He has sufficient quality points for an overall average of 2.0.
3. He has taken care of all financial obligations to the Caldwell Technical Institute.

## Honors

A graduating student who has earned an overall quality-point average of 3.0 or better during his work at the Caldwell Technical Institute will receive his diploma or degree "With Honors".

## STUDENT PERSONNEL ACTIVITIES AND SERVICES

### Counseling

Opportunity for counseling services is made available to every student enrolled in the Caldwell Technical Institute. Counseling services are available for the discussion of personal problems affecting the satisfactory progress of the student in his chosen curriculum, for the discussion of his educational progress and for the discussion of work or study habits.

Each student is also assigned a faculty advisor to whom he may go for help.

### Financial Aid

#### Scholarships

A limited number of scholarships are available at present; however, more scholarships are expected in the near future. Students desiring such aid should make this known when filing an admission application.

Self-help opportunities of a limited nature will be provided by the Caldwell Technical Institute to selected students who need to work in order to remain in school.

#### Long-Term Loans

National Defense Student Loans - The Caldwell Technical Institute is participating in the National Defense Student Loan Program making funds available to students or entering

freshmen who are taking at least a half-time schedule in one of the associate-degree programs. The College share, 10 per cent, is being contributed by civic organizations.

The National Student Loan Fund Act makes provisions for students to borrow up to \$1,000 in any one year. Three per cent interest per year is charged on the unpaid balance beginning one year after the borrower ceases to pursue a course of study at an institution of higher learning. The total loan must be repaid in ten years. Students may make application through the financial aid counselor in the Student Services Office.

North Carolina Funds for Vocational and Technical Students - The Caldwell Technical Institute is participating in the student loan program established by the State Board of Education making financial assistance available to those students enrolled full time in a vocational or technical education program. Qualified students may borrow up to \$300.00 in any year. Three and one-half per cent interest per year is charged on the unpaid balance beginning one year after the borrower ceases to pursue a full-time course of study at Caldwell Technical Institute. The total loan must be repaid in five years. Students may make application through the financial aid counselor in the Student Services Office.

Funds to support this loan program are limited, but it is hopeful that additional monies will be contributed by other organizations for this worthwhile purpose.

### Draft Deferment

Draft Deferment forms are mailed to local Selective Service Boards upon request after registration.

### Placement Services

A placement service will provide for graduates of the Caldwell Technical Institute. Personal-data sheets on

each student will be prepared for prospective employers. Interviews will be arranged as opportunities arise.

### Student Housing

No dormitory facilities are available at the Caldwell Technical Institute.

### Veterans

Qualified veterans who are admitted for instruction may be approved upon presentation of the Certificate of Eligibility issued by the Veterans Administration. Students will be accepted under Public Law 550 or Public Law 16-610. Veterans under Public Law 550 are responsible directly to the school for payment of all costs. The Veterans Administration will pay the fees of students who come under Public Law 16-610.

### Books and Supplies

Students are responsible for securing their own textbooks and other supplies which may be required. Since these items may be used on the first day of classes, they should be purchased on the day of registration. The College bookstore is kept open extra hours during registration.

### Library Facilities

The library has a collection of over 7,000 books and catalogued pamphlets and receives over 75 periodicals. New titles are being added continually. The open-shelf system is used; students are encouraged to browse and use the reading room as a quiet place to study.

### Studio, Laboratory, and Shop Equipment

Ample opportunity for students to make practical application of their classroom work is an inherent part of many programs offered at the Institute. Within the

framework of regulations, which are always necessary when expensive equipment is involved, students have some of the best equipment available for their use.

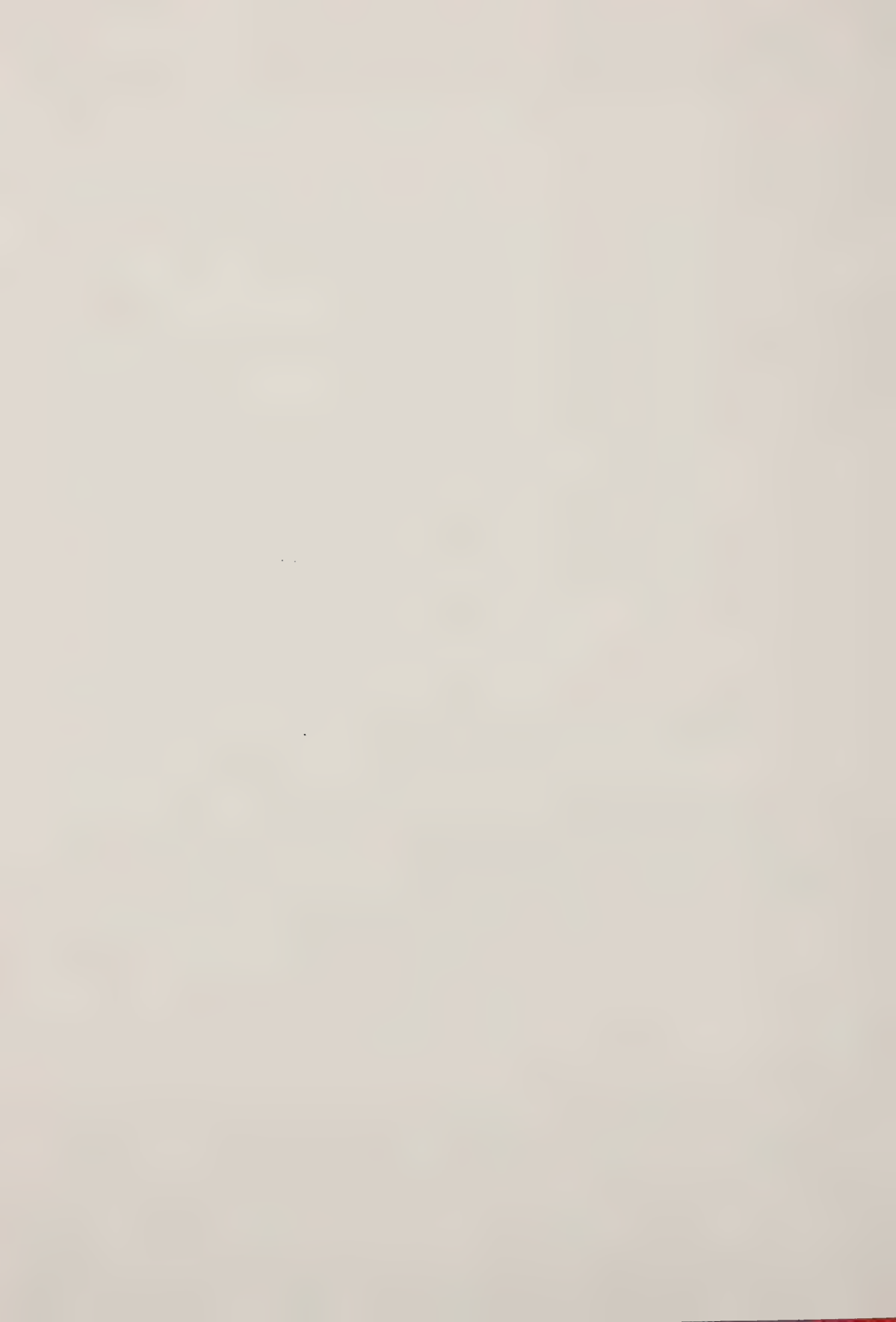
#### Attendance Policy

This school has no system for allowing absences from classes. Absences are a serious deterrent to good scholarship; it is impossible to receive instruction, obtain knowledge, or gain skill when absent. As all students are adults with many responsibilities, an occasional absence from class might be absolutely necessary; however, such absences in no way lessen the student's responsibility for meeting the requirements of the class. There is always, however, a direct relationship between the number of class absences and the final grade. It is the student's responsibility to contact the instructor for any missed assignments. Explanation for an absence will not be demanded, but as a matter of courtesy the reason for it should be given to the instructor.

#### Student Conduct

Institute students are considered to be mature individuals. Their conduct, both in and out of school, is expected to be that of any respectable adult in a public place. Under these circumstances, it is expected that the students will at all times consider they are living in a democratic situation, and that the reputation of the institution rests on their shoulders. Common courtesy and cooperation make the above suffice for a long list of rules and penalties.

ASSOCIATE IN  
APPLIED SCIENCE  
DEGREE  
PROGRAMS



## TECHNICAL CURRICULA

The two-year technical curricular program is designed to prepare enrollees for technician-level occupations. More emphasis is given to theory than in vocational courses. Also, roughly one-half of the course requirements are in general education and the sciences underlying the particular occupational area.



## ADMISSION REQUIREMENTS - TECHNICIAN PROGRAM

### MINIMUM ADMISSION REQUIREMENTS

Requirements for admission of a candidate to the regular two-year technology program include the following qualifications. The candidate:

1. Must be a high school graduate or have a State approved equivalent education.
2. Must have high school credit for two units of mathematics, one of which is in algebra and the other in plane geometry or an equivalent in modern mathematics. Competence may be determined by appropriate tests. Those who fail to meet the accepted standards for technical mathematics will be required to complete successfully a prerequisite mathematics course to remove the deficiency. A student with deficiencies may be admitted only when there is strong indication of probable success.
3. Should have completed one unit of physical science with laboratory.
4. Must submit the transcripts of high school and post-high school education.
5. Must demonstrate aptitude for technician training as determined by standard tests. These tests will aid in student selection, placement, and guidance. Institution guidance and counseling will be available to the student throughout his education, not just at the time of his enrollment.
6. Must be in acceptable condition of physical and mental health. Medical examination may be required at the discretion of the administration.
7. Must have an interview with a designated representative for discussing enrollment plans and lifetime career goals.

## CONTACT HOURS AND CREDIT HOURS

These curriculums are to be offered on the basis of an average load of twenty-five contact hours per five-day week, eleven weeks per quarter, for six quarters. Students enrolled in a part-time program will be scheduled, based on class needs, to accomplish this average load, but over a longer period of time.

Quarterly credit hours are awarded to students on the following arrangement:

Credit of one quarter hour for each hour of class work per week for eleven weeks. The average hour of class will require two hours of assigned homework, for an average student.

Credit of one quarter hour for each two hours of laboratory work per week for eleven weeks. One hour of assigned homework will accompany an average laboratory period of two hours.

Credit of one quarter hour for each three hours of manipulative laboratory for eleven weeks. No outside work will ordinarily be assigned to accompany this shop period. Manipulative laboratories will be indicated by an asterisk.

The following definitions will explain the foregoing terms:

"Class work" is lecture and other classroom instruction.

"Laboratory" involves demonstration by instructor, experimentation and practice by students.

"Manipulative laboratory" involves development of manual skills and job proficiency.

## ADMISSION REQUIREMENTS - ALL BUSINESS PROGRAMS

### MINIMUM ADMISSION REQUIREMENTS

Requirements for admission of a candidate to the regular two-year Associate of Applied Science Degree program include the following qualifications. The candidate:

1. Must be a high school graduate or have a State approved equivalent education.
2. Must submit the transcripts of high school and post-high school education.
3. Must demonstrate aptitude for business training as determined by standardized tests. These tests will aid in student selection, placement, and guidance. Institution guidance and counseling will be available to the student throughout his education, not just at the time of his enrollment.
4. Must be in acceptable condition of physical and mental health. Medical examination may be required at the discretion of the administration.
5. Must have an interview with a designated representative for discussing enrollment plans and lifetime career goals.

### ELECTIVES

These programs have provisions for electives. Students with skills in typing and shorthand may be exempt from taking BUS 302 Typewriting, BUS 303 Typewriting, and BUS 306 Shorthand. In this case, the student is to elect a course of equivalent or more hours from any business education curriculum of the associate degree level. These courses are indicated in the suggested curriculum by an asterisk. Electives indicated by two asterisks may be selected from any of the associate degree-level curricula. The Institution may designate any of the electives, or may let the student elect the course.

# BUSINESS ADMINISTRATION

## INTRODUCTION

### Purpose of Curriculum

In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in this State, business will become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in every phase of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding and skill in effective communication for business.
3. Knowledge of human relations as they apply to the successful operations in the rapidly expanding business economy.

### Job Description

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various

office machines, and assisting managers in supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation; and communications.

## BUSINESS ADMINISTRATION

### SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>	<u>Course Hours</u>		Quarter Hours Credit
	<u>Per Week</u>		
<u>FIRST QUARTER</u>	<u>Class</u>	<u>Lab.</u>	
ENG 302 Communicative Skills: English	3	0	3
BUS 302 Typewriting (Or Elective)*	1	4	3
MA 310 Business Mathematics	3	0	3
BUS 301 Introduction to Business	3	0	3
BUS 351 Business Law	3	0	3
BUS 317 Sales Development	<u>3</u>	<u>0</u>	<u>3</u>
	16	4	18
<u>SECOND QUARTER</u>			
ENG 305 Communicative Skills: Report Writing	3	0	3
BUS 320 Accounting	5	2	6
BUS 352 Business Law	3	0	3
SOC 302 Economics	3	0	3
BUS 339 Marketing	<u>3</u>	<u>0</u>	<u>3</u>
	17	2	18

---

\*Elective courses must be selected from the business education curriculum.

<u>Course Title</u>		<u>Course Hours</u>		<u>Quarter</u>
		<u>Per Week</u>		<u>Hours</u>
<u>THIRD QUARTER</u>		<u>Class</u>	<u>Lab.</u>	<u>Credit</u>
ENG 306	Communicative Skills:			
	Business Communications	3	0	3
BUS 355	Interpreting Accounting			
	Records	3	0	3
SOC 304	Economics	3	0	3
BUS 316	Retailing	3	0	3
BUS 328	Business Insurance	3	0	3
BUS 360	Office Machines	2	2	3
		17	2	18

#### FOURTH QUARTER

ENG 307 Communicative Skills: Oral Communications	3	0	3
BUS 364 Business Finance	3	0	3
BUS 366 Budget and Record Keeping	3	0	3
DP 311 Introduction to Data Processing Systems	3	2	4
BUS 337 Wholesaling	3	0	3
Elective **	<u>3</u>	<u>0</u>	<u>3</u>
	18	2	19

#### FIFTH QUARTER

ENG 304 Communicative Skills: Speech	2	0	2
BUS 365 Business Finance	3	0	3
BUS 327 Advertising	3	2	4
BUS 335 Business Management	3	0	3
SOC 310 Applied Psychology	3	0	3
Elective**	<u>3</u>	<u>0</u>	<u>3</u>
	17	2	18

---

\*\*Elective courses must be selected from the associate degree curriculum. The institution may elect to require courses, or may let the student have a free elective.

<u>Course Title</u>	<u>Course Hours</u>		<u>Quarter</u>
	<u>Per Week</u>		<u>Hours</u>
<u>SIXTH QUARTER</u>	<u>Class</u>	<u>Lab.</u>	<u>Credit</u>
BUS 368 Taxes	3	0	3
BUS 333 Personnel Management	3	0	3
BUS 332 Sales Promotion Management	3	0	3
BUS 372 Principles of Supervision	3	0	3
Elective **	<u>5</u>	<u>0</u>	<u>5</u>
	17	0	17

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\*\* Elective courses must be selected from the associate degree curriculum. The institution may elect to require courses, or may let the student have a free elective.

## EXECUTIVE SECRETARY

### INTRODUCTION

#### Purpose of Curriculum

The demand for better qualified secretaries in our ever-expanding business world is becoming more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business world, and to enable persons to become proficient soon after accepting employment in the business office.

The Executive Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the business world. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development. During the last quarter, the student engages in six hours of office application each week in a business office.

#### Job Description

The graduate of the Executive Secretary Curriculum should have a knowledge of business terminology, skill in dictation, and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses such as insurance companies, banks, marketing institutions, and financial firms.

EXECUTIVE SECRETARY

SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>	<u>Course Hours</u> <u>Per Week</u>		<u>Quarter</u> <u>Hours</u> <u>Credit</u>
<u>FIRST QUARTER</u>	<u>Class</u>	<u>Lab.</u>	
ENG 302 Communicative Skills:			
English	3	0	3
BUS 302 Typewriting (Or Elective)*	1	4	3
MA 310 Business Mathematics	3	0	3
BUS 301 Introduction to Business	3	0	3
BUS 306 Shorthand (Or Elective)*	1	4	3
BUS 351 Business Law	3	0	3
	<u>14</u>	<u>8</u>	<u>18</u>
<u>SECOND QUARTER</u>			
ENG 305 Communicative Skills:			
Report Writing	3	0	3
ENG 303 Typewriting (Or Elective)*	1	4	3
BUS 307 Shorthand	1	4	3
BUS 320 Accounting	5	2	6
SOC 302 Economics	3	0	3
	<u>13</u>	<u>10</u>	<u>18</u>
<u>THIRD QUARTER</u>			
ENG 306 Communicative Skills:			
Business Communications	3	0	3
BUS 304 Typewriting	1	4	3
BUS 308 Shorthand	1	4	3
SOC 312 Personality Development	3	0	3
BUS 360 Office Machines	2	2	3
BUS 383E Terminology and Vocabulary (Business)	3	0	3
	<u>13</u>	<u>10</u>	<u>18</u>

\*Elective courses must be selected from the business education curriculum.

<u>Course Title</u>	<u>Course Hours</u>		<u>Quarter Hours Credit</u>
	<u>Per Week</u>		
<u>FOURTH QUARTER</u>	<u>Class</u>	<u>Lab.</u>	
ENG 307 Communicative Skills: Oral Communications	3	0	3
BUS 356E Dictation and Transcrip- tion (Business)	3	2	4
DP 311 Introduction to Data Processing Systems	3	2	4
BUS 350E Advanced Typewriting (Business)	1	4	3
BUS 361 Office Machines	2	2	3
Elective **	<u>3</u>	<u>0</u>	<u>3</u>
	15	10	20

#### FIFTH QUARTER

ENG 304 Communicative Skills: Speech	2	0	2
BUS 357E Dictation and Transcrip- tion (Business)	3	2	4
BUS 340 Secretarial Procedures	3	0	3
SOC 310 Applied Psychology	3	0	3
BUS 366 Budget and Record Keeping	3	0	3
DD 307 General Drafting	<u>2</u>	<u>3</u>	<u>3</u>
	16	5	18

#### SIXTH QUARTER

BUS 370E Office Application (Business)	6	0	6
BUS 358E Dictation and Transcrip- tion (Business)	3	2	4
BUS 371 Office Management	3	0	3
Elective **	<u>3</u>	<u>0</u>	<u>3</u>
	15	2	16

\*\*Elective courses must be selected from the associate degree curriculum. The institution may elect to require certain courses, or may let the student have a free elective.

# MEDICAL SECRETARY

## INTRODUCTION

### Purpose of Curriculum

The demand for better-qualified medical secretaries in our ever-expanding medical profession is becoming more acute. The purpose of this curriculum is to outline a training program that will provide specialized training in the accepted procedures required by the medical profession, and to enable persons to become proficient soon after accepting employment in the medical and health occupations.

The Medical Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the medical profession. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development. During the last quarter, the student engages in six hours of office application each week in a hospital or physician's office.

### Job Description

The graduate of the Medical Secretary Curriculum should have a knowledge of medical terminology, skill in dictation, and accurate transcription of medical records, reports, and letters. The duties of a medical secretary may consist of: taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing, and scheduling appointments. The graduate may enter a secretarial position in a variety of offices such as physicians', private and public hospitals, Federal and State health programs, and the drug and pharmaceutical industry.

## MEDICAL SECRETARY

### SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>		<u>Course Hours</u>		<u>Quarter</u>
		<u>Per Week</u>		<u>Hours</u>
<u>FIRST QUARTER</u>		<u>Class</u>	<u>Lab.</u>	<u>Credit</u>
ENG 302	Communicative Skills:			
	English	3	0	3
BUS 302	Typewriting (Or Elective)*	1	4	3
MA 310	Business Mathematics	3	0	3
BUS 301	Introduction to Business	3	0	3
BUS 306	Shorthand (Or Elective)*	1	4	3
BUS 351	Business Law	3	0	3
		14	8	18

### SECOND QUARTER

ENG 305	Communicative Skills:			
	Report Writing	3	0	3
BUS 303	Typewriting (Or Elective)*	1	4	3
BUS 307	Shorthand	1	4	3
BUS 320	Accounting	5	2	6
SOC 302	Economics	3	0	3
		13	10	18

### THIRD QUARTER

ENG 306	Communicative Skills:			
	Business Communications	3	0	3
BUS 304	Typewriting	1	4	3
BUS 308	Shorthand	1	4	3
SOC 312	Personality Development	3	0	3
BUS 360	Office Machines	2	2	3
BUS 383M	Terminology and Vocabulary (Medical)	3	0	3
		13	10	18

\*Elective courses must be selected from the business education curriculum.

<u>Course Title</u>		<u>Course Hours</u>		<u>Quarter</u>
		<u>Per Week</u>		<u>Hours</u>
<u>FOURTH QUARTER</u>		<u>Class</u>	<u>Lab.</u>	<u>Credit</u>
ENG 307	Communicative Skills: Oral Communications	3	0	3
BUS 356M	Dictation and Transcription (Medical)	3	2	4
DP 311	Introduction to Data Processing Systems	3	2	4
BUS 350M	Advanced Typewriting (Medical)	1	4	3
BUS 361	Office Machines	2	2	3
BUS 384M	Terminology and Vocabulary (Medical)	3	0	3
		<u>15</u>	<u>10</u>	<u>20</u>

#### FIFTH QUARTER

ENG 304	Communicative Skills: Speech	2	0	2
BUS 357M	Dictation and Transcription (Medical)	3	2	4
BUS 340	Secretarial Procedures	3	0	3
SOC 310	Applied Psychology	3	0	3
BUS 366	Budget and Record Keeping	3	0	3
Elective **		3	0	3
		<u>17</u>	<u>2</u>	<u>18</u>

#### SIXTH QUARTER

BUS 370M	Office Application (Medical)	6	0	6
BUS 358M	Dictation and Transcription (Medical)	3	2	4
BUS 371	Office Management	3	0	3
DD 307	General Drafting	2	3	3
		<u>14</u>	<u>5</u>	<u>16</u>

\*\*Elective courses must be selected from the associate degree curriculum. The institution may elect to require certain courses, or may let the student have a free elective.

# FURNITURE   DRAFTING AND DESIGN

## INTRODUCTION

### Purpose of Curriculum

This curriculum guide was prepared for the purpose of outlining a training program for students of drafting and design technology. There are certain identifiable duties which are common to all technicians of this general classification and which comprise the basic areas of technical knowledge they need. This curriculum has been designed for training persons in the accepted performance of these basic duties that will be assigned, and to enable the individual student to become proficient in a short time after he becomes employed in the industry.

Courses in general education have been included to give a student the assurance that comes with education upon a broad base. The technician associates with many levels of thought and expression - administrative personnel, scientists, engineers, skilled workmen - and must be able to communicate effectively with all levels. Courses in the skills of communication, human relations, economics, and the field of industrial organization and management have been provided to assist the student to develop understanding and confidence. Courses containing essential information from related subject areas, such as mathematics, physics, and mechanics, have been included in order to provide the student a better academic base for his training.

### Job Description

Furniture drafting and design technicians are concerned with the preparation of drawings for design proposals, for experimental models, and items for production use.

These technicians perform many aspects of design in a specialized field, such as the developing of the design of

a section, sub-assembly, or major component. Investigating design factors and availability of material and equipment, production methods and facilities are frequent assignments. They also design units and controls from specifications by utilizing drawings of existing units and reports on functional performance or design components in industrial fields based on engineers' original design concepts or specific ideas. They are assigned as coordinators for the execution of related work of other design, production, tooling, material and planning groups. Technicians in this classification will often supervise the preparation of working drawings.

## FURNITURE      DRAFTING AND DESIGN

### SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>			<u>Course Hours</u>		<u>Quarter</u>
			<u>Per Week</u>		<u>Hours</u>
<u>FIRST QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Credit</u>
DD	301	Technical Drafting	2	6*	4
MA	301	Technical Mathematics	5	0	5
ENG	301	Communicative Skills:			
		Reading Improvement	2	0	2
PHY	301	Physics: Properties of			
		Matter	3	2	4
MECH	301	Materials, Tools and			
		Processes	<u>2</u>	<u>2</u>	<u>3</u>
			14	10	18

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\*"Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

<u>Course Title</u>			<u>Course Hours</u>		<u>Quarter</u>
			<u>Per Week</u>		<u>Hours</u>
<u>SECOND QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Credit</u>
DD	302	Technical Drafting	2	6*	4
MA	302	Technical Mathematics	5	0	5
ENG	302	Communicative Skills: English	3	0	3
PHY	302	Physics: Work Energy, Power	3	2	4
MECH	302	Materials, Tools, Processes	<u>2</u>	<u>2</u>	<u>3</u>
			15	10	19

### THIRD QUARTER

DD	303	Technical Drafting	2	6*	4
MA	303	Technical Mathematics	5	0	5
ENG	303	Communicative Skills: Technical Writing	3	0	3
PHY	303	Physics: Electricity	3	2	4
MECH	303	Materials, Tools, and Processes	<u>2</u>	<u>2</u>	<u>3</u>
			15	10	19

### FOURTH QUARTER

DD	304	Technical Drafting - Furniture	2	6	4
DES	304	Visual Design I	2	6	4
TD	304	Tectonic Design	2	6	4
DD	310	Descriptive Geometry	2	4	4
ENG	304	Communicative Skills: Speech	<u>2</u>	<u>0</u>	<u>2</u>
			10	22	18

\*"Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

<u>Course Title</u>			<u>Course Hours</u>		Quarter Hours Credit
			<u>Per Week</u>		
<u>FIFTH QUARTER</u>			<u>Class</u>	<u>Lab.</u>	
DD	305	Design Drafting I - Furniture	2	6	4
DES	305	Visual Design II	2	4	4
MM	306	Upholstery Materials and Methods	2	2	3
MM	305	Case Materials and Methods	2	2	3
Elective	**		<u>3</u>	<u>0</u>	<u>3</u>
			11	14	17
 <u>SIXTH QUARTER</u>					
DD	306	Design Drafting II - Furniture	4	6	4
FD	306	Styling	2	4	4
SOC	301	Human Relations	2	0	2
ISc	301	Industrial Organization and Management	3	0	3
Elective	**		<u>3</u>	<u>0</u>	<u>3</u>
			14	10	16

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\*\*Elective courses must be selected from the associate degree curriculum. The institution may elect to require courses, or may let the student have a free elective.

# LIBRARY ASSISTANT

## INTRODUCTION

### Purpose of Curriculum

A two-year program designed to prepare library assistants for technical work in libraries - public school, hospital, government, and industry. The training for the Library Assistant is for the person who has a genuine interest in libraries and the services they render.

To the outsider, library work consists of checking books out to library patrons and checking these same books in when they are returned. Although the circulation of books and related materials is one of the major functions performed in a library, the fact is there are other busy departments which contribute to the smooth operation of the whole organization.

There is the librarian's office which sets policy and handles the administrative management of the library as a whole.

There is the order department which receives requests from the public and the library staff for books, periodicals, pamphlets, records and films and places orders for these items.

There is the catalog department which catalogues and classifies materials before they are ready to circulate.

There is the reference department which houses the reference books and assists patrons in their use.

In addition to these departments found in almost all libraries, there are libraries in universities, colleges, schools, and industry which are not departmentalized and which serve special groups of readers.

The services of trained library assistants can be used to advantage in any of these libraries or departments, and the courses offered at Caldwell Technical Institute are geared to prepare students for just such opportunities.

Upon completion of training the Caldwell Technical Institute graduate will be eligible to fill a position as an active member of a library staff.

### Job Description

This curriculum is in the planning stage of development. The following areas will be covered:

Library Services: Course includes instruction in library ethics, types of library service and the various libraries which employ library assistants. Orientation to all types of library work is provided.

Library Resources: Instruction is given on how to obtain information through use of the card catalog, indexes, reference books, and other library materials.

Cataloging Techniques: Instruction includes typing catalog cards, cataloging simple fiction, checking the shelf list, and related duties.

Ordering Procedures: Techniques for ordering and processing books and other library materials are taught.

Circulation Procedures: This course gives instruction in circulation work and related public services.

Communications Media: Instruction covers various media related to public relations by means of stories, displays, and personal contacts.

Book Binding and Book Repair: The course offers instruction in the binding and repair of books, pamphlets and magazines in accordance with library standards.



## DIPLOMA PROGRAMS



## VOCATIONAL CURRICULA

One year diploma programs designed to prepare enrollees for trade level occupations. Much emphasis is given to the development of manipulative skills.



## ADMISSION REQUIREMENTS - TRADE PROGRAM

The following are minimum admission requirements to the regular one-year trade preparatory curriculums and vocational programs:

### MINIMUM ADMISSION REQUIREMENTS

A candidate for admission to the regular trade-vocational training programs must meet the following qualifications:

1. Must be at least 18 years of age and have the ability to enter into or make advancement in the area in which enrolled.
2. Must have satisfactorily completed a minimum of eight (8) units or accredited secondary school work. Those who have not successfully completed eight (8) units of such work will be required to take other standard and/or local institution tests.
3. Must demonstrate aptitude for trade-vocational training as determined by standard and/or local institution tests to insure ability to meet job requirements in the desired trade.
4. Must have one (1) unit of secondary school algebra or an equivalent in modern mathematics. Those who have deficiencies will be required to remove the deficiency before completing their training.

Provisional admittance may be granted at the discretion of the Center administration.

5. Must have a personal interview with designated school representative.
6. Must be in acceptable condition of physical and mental health to meet qualifications for a given occupation.

## CONTACT HOURS AND CREDIT HOURS

These curriculums are to be offered on the basis of an average load of twenty-five contact hours per five-day week, eleven weeks per quarter, for four quarters. Students enrolled in a part-time program will be scheduled, based on class needs, to accomplish this average load, but over a longer period of time.

Quarterly credit hours are awarded to students on the following arrangement:

Credit of one quarter hour for each hour of class work per week for eleven weeks. The average hour of class will require two hours of assigned homework, for an average student.

Credit of one quarter hour for each two hours of laboratory work per week for eleven weeks. One hour of assigned homework will accompany an average laboratory period of two hours.

Credit of one quarter hour for each three hours of shop practice for eleven weeks. No outside work will ordinarily be assigned to accompany this shop period.

The following definitions will explain the foregoing terms:

"Class work" is lecture and other classroom instruction.

"Laboratory" involves demonstration by instructor, experimentation and practice by students.

"Shop practice" involves development of manual skills and job proficiency.

# AUTOMOTIVE MECHANICS

## INTRODUCTION

### Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, and shop practice.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks, buses, and a variety of gasoline-powered equipment. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

### Job Description

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and buses. In some communities and rural areas, they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

## AUTOMOTIVE MECHANICS

### SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>			<u>Course Hrs. Per Wk.</u>			<u>Quarter</u>
					<u>Shop</u>	<u>Hours</u>
<u>FIRST QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Prac.</u>	<u>Credit</u>
AUTO 121	Automotive Engines		3	0	12	7
MA 120	Fundamentals of Mathematics		5	0	0	5
ENG 101	Reading Improvement		2	0	0	2
PHY 104	Applied Physics I		<u>1</u>	<u>2</u>	<u>0</u>	<u>2</u>
			11	2	12	16

### SECOND QUARTER

AUTO 122	Automotive Electrical and Fuel Systems		3	0	12	7
PHY 105	Applied Physics II		1	2	0	2
ENG 102	Communication Skills		2	0	0	2
DD 121	Blueprint Reading		<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
			9	2	12	14

### THIRD QUARTER

AUTO 123	Automotive Chassis and Suspensions		3	0	12	7
AHR 101	Automotive Air-Conditioning		3	0	0	3
SOC 101	Human Relations		2	0	0	2
MECH 112	Welding		0	0	3	1
PHY 106	Applied Physics III		<u>1</u>	<u>2</u>	<u>0</u>	<u>2</u>
			9	2	15	15

### FOURTH QUARTER

AUTO 124	Automotive Power Train Systems		3	0	9	6
SOC 103	Management Procedures		3	0	0	3
AUTO 125	Automotive Servicing		<u>3</u>	<u>0</u>	<u>9</u>	<u>6</u>
			9	0	18	15

# COSMETOLOGY

## INTRODUCTION

### Purpose of Curriculum

This course outline is planned to meet the requirements of the North Carolina Board of Cosmetics Arts. Twelve hundred hours of instruction covers a period of ten months, which is equivalent to two hundred school days at the rate of five days per week and six hours per day.

The first quarter of instruction consists of the fundamentals of ethics, history, theory, and practice. The acquisition of correct habits and skills is stressed. The class activities include practical lessons, lectures, demonstrations, student practice on wefts and patrons.

The second quarter of instruction places more emphasis on manipulative skills. Practical work is done almost exclusively on patrons and models.

In the third quarter the students are capable of doing work unassisted and are equipped for the state examination and outside employment. Each student, prior to filing an application to the Cosmetic Arts Board for examination, is given a test both theoretical and practical.

### Job Description

Cuts hair according to patron's instructions or according to original style (barber). Combs and waves patron's hair (hairedresser), occasionally suggesting or creating new and varied coiffures to meet individual needs (hair stylist). Tints or dyes hair (hair dyer). Gives hair and scalp treatments in accordance with standardized methods (scalp-treatment operator). Applies various lotions, creams, and packs to patron's face to clean or treat skin, remove wrinkles, and to apply cosmetics (facial operator). Cleans, shapes, and polishes patron's nails (manicurist).

# COSMETOLOGY

## COURSES BY QUARTER

### FIRST QUARTER

Introduction to Cosmetology  
Personality  
Bacteriology  
Sterilization  
Anatomy  
Chemistry  
First Aid and Safety

### SECOND QUARTER

Hair  
Shampoo and Rinse  
Scalp Treatments  
Haircutting  
Hair Styling  
Permanent Waving  
Tinting and Bleaching  
Safety

### THIRD QUARTER

Theory of Massage  
Skin  
Facials  
Electricity and Electrolysis  
Nails  
Manicuring  
Disorders of Skin, Hair, and Nails  
Management  
Charm, Beauty, and Poise

# ELECTRICAL - ELECTRONIC DRAFTING

## INTRODUCTION

### Purpose of Curriculum

This curriculum is designed to prepare students to enter the field of electrical-electronic drafting. The first two quarters contain courses basic to all fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter electrical-electronic drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel - administrative, architects, engineers, skilled workmen - and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics, and industrial organization are provided to assist the student in developing understanding and confidence in his relations with other persons.

### Job Description

Draftsman prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions: Makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in all lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of triangle, T-square, and other drafting tools. Lays tracing paper on drawing and traces drawing in ink. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

Electrical-Electronic Draftsman prepares instrument drawings for electrical power systems, electrical parts, electronics parts, schematics, wiring diagrams, sheet metal chassis, and mechanical parts applicable to the electrical or electronics industries.

## ELECTRICAL - ELECTRONIC DRAFTING

### SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>			<u>Course Hrs.</u>	<u>Per Wk.</u>	<u>Quarter</u>	
				Shop	Hours	
<u>FIRST QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Prac.</u>	<u>Credit</u>
DD	131	Drafting	3	0	12	7
MA	121	Geometry	3	0	0	3
ENG	101	Reading Improvement	2	0	0	2
PHY	104	Applied Physics I	1	2	0	2
DD	105	Drafting Analysis	2	0	0	2
			11	2	12	16

### SECOND QUARTER

DD 132	Drafting	3	0	12	7
MA 124	Algebra	5	0	0	5
ENG 102	Communication Skills	2	0	0	2
PHY 105	Applied Physics II	1	2	0	2
DD 135	Descriptive Geometry	<u>1</u>	<u>4</u>	<u>0</u>	<u>3</u>
		12	6	12	19

### THIRD QUARTER

DD 151	Electrical-Electronic Drafting	3	0	12	7
MA 126	Trigonometry	3	0	0	3
PHY 106	Applied Physics III	1	2	0	2
MECH 113	Shop Processes	2	2	0	3
ELEC 121	Electrical Machines and Controls	<u>3</u>	<u>2</u>	<u>0</u>	<u>4</u>
		12	6	12	19

<u>Course Title</u>			<u>Course Hrs. Per Wk.</u>			<u>Shop</u>	<u>Quarter</u>
						<u>Hours</u>	
<u>FOURTH QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Prac.</u>		<u>Credit</u>
DD 152	Electrical-Electronic						
	Drafting		3	0	12		7
SOC 101	Human Relations		2	0	0		2
ISc 102	Industrial Organizations		3	0	0		3
MECH 119	Sheet Metal Shop Processes		2	2	0		3
ELN 121	Electronic Fundamentals		<u>3</u>	<u>2</u>	<u>0</u>		<u>4</u>
			13	4	12		19

# ELECTRICAL INSTALLATION AND MAINTENANCE

## INTRODUCTION

### Purpose of the Curriculum

The rapid expansion of the national economy and the increasing development of new electrical products is providing a growing need for qualified people to install and maintain electrical equipment. By mid-1965 more than 350,000 were employed as either construction electricians or maintenance electricians. Between 5,000 and 10,000 additional tradesmen are required each year to replace those leaving the industry. It is expected that the total requirements for electrical tradesmen will reach 600,000 by 1968 and 700,000 by 1970. The majority of the electrical tradesmen today are trained through apprenticeship or on-the-job training programs.

This curriculum guide will provide a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large portion of the program is devoted to laboratory and shop instruction which is designed to give the student practical knowledge and application experience in the fundamentals taught in class.

### Job Description

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice, where he will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits. He will have a basic knowledge of motor control systems; industrial electronic control systems; business procedures, organization, and practices; communicative skills; and the necessary background to be able to advance through experience and additional training through up-grading courses offered in the center.

# ELECTRICAL INSTALLATION AND MAINTENANCE

## SUGGESTED CURRICULUM BY QUARTERS

		<u>Course Title</u>	<u>Course Hrs.</u>		<u>Per Wk.</u>	<u>Quarter</u>
					<u>Shop</u>	<u>Hours</u>
<u>FIRST QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Prac.</u>	<u>Credit</u>
MA	125	Electrical Math	5	0	0	5
ELEC	122	Direct and Alternating Current	7	8	3	12
ENG	101	Reading Improvement	<u>2</u>	<u>0</u>	<u>0</u>	<u>2</u>
			14	8	3	19

### SECOND QUARTER

ELEC	123	Alternating Current and Direct Current Machines and Controls	5	10	0	10
DD	120	Building Trades Blueprint Reading and Sketching	5	0	0	5
ENG	102	Communication Skills	2	0	0	2
SOC	101	Human Relations	<u>2</u>	<u>0</u>	<u>0</u>	<u>2</u>
			14	10	0	19

### THIRD QUARTER

ELEC	124	Residential Wiring	5	0	9	8
ELN	118	Industrial Electronics I	4	4	0	6
SOC	103	Management Procedures or				
ISc	102	Industrial Organizations	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
			12	4	9	17

### FOURTH QUARTER

ELEC	125	Commercial and Industrial Wiring	5	0	9	8
ELN	119	Industrial Electronics II	<u>5</u>	<u>6</u>	<u>0</u>	<u>8</u>
			10	6	9	16

# FURNITURE DRAFTING

## INTRODUCTION

### Purpose of Curriculum

This curriculum is designed to prepare students to enter the field of furniture drafting. The first two quarters contain courses basic to all fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter furniture drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel -- administrative, architects, engineers, skilled workmen -- and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics, and industrial organization are provided to assist the student in developing understandings and confidence in his relations with other persons.

### Job Description

Draftsman prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions. Makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relations of one part to another, and the relation of the various parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in all lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of drawing and traces drawing in ink. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

Furniture draftsman. Performs duties of draftsman, but specializes in making rough drafting sketches of proposed furniture pieces and then drawing necessary details from the sketch. Prepares accurate scale drawings of furniture parts or groups to reduced or full scale. Prepares specifications and bills of materials for manufacture of part.

Furniture Reproducer Draftsman. Makes working drawings and templates of antique or specially ordered furniture, for reproduction purposes. Draws sketch of piece showing all views, freehand or with drawing instruments. Measures piece with rule and calipers, and notes dimensions of drawing. Makes detailed drawing of joints, carvings, and sections for shop use. Traces or draws outlines of parts on plywood or cardboard and cuts out part along outline to make template. Marks identification on templates indicating name of part, types of construction, kinds of wood, and finishes, in code or words. May make drawings from pictures when models are not available.

## FURNITURE DRAFTING

### SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>			<u>Course Hrs. Per Wk.</u>		<u>Quarter</u>	
				Shop	Hours	
<u>FIRST QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Prac.</u>	
					<u>Credit</u>	
DD	131	Drafting	3	0	12	7
MA	121	Geometry	3	0	0	3
ENG	101	Reading Improvement	2	0	0	2
PHY	104	Applied Physics I	1	2	0	2
DD	105	Drafting Analysis	2	0	0	2
			11	2	12	16

### SECOND QUARTER

DD	132	Drafting	3	0	12	7
MA	124	Algebra	5	0	0	5
ENG	102	Communication Skills	2	0	0	2
PHY	105	Applied Physics II	1	2	0	2
DD	135	Descriptive Geometry	1	4	0	3
			<u>12</u>	<u>6</u>	<u>12</u>	<u>19</u>

### THIRD QUARTER

DD	161	Furniture Drafting	3	0	12	7
MA	126	Trigonometry	3	0	0	3
PHY	106	Applied Physics III	1	2	0	2
UPH	111	Upholstery Materials and Methods	1	2	0	2
CAB	110	Case Goods Materials and Methods	2	2	0	3
			<u>10</u>	<u>6</u>	<u>12</u>	<u>17</u>

### FOURTH QUARTER

DD	162	Furniture Drafting	3	0	12	7
DD	163	Furniture Specifications	3	0	0	3
DD	165	Furniture Styling and Decoration	3	0	0	3
SOC	101	Human Relations	2	0	0	2
ISc	102	Industrial Organization	3	0	0	3
			<u>14</u>	<u>0</u>	<u>12</u>	<u>18</u>

# CARPENTRY AND CABINET MAKING

## INTRODUCTION

### Purpose of Curriculum

This curriculum provides a one-year training program for the instruction of students in the basic knowledge and skills involved in the use of hand and power tools, in commercial and residential types of construction, and cabinet making. Stress is laid on good work habits in acquiring both skill and craftsmanship. (Good working relationships with members of related trades are also stressed.) Students will be presented a variety of experiences and problems such as are encountered in the trade.

Along with other construction-type jobs, the carpentry and cabinet-making field is facing a critical shortage of skilled craftsmen. The ever-increasing volume of construction is creating more job opportunities than can be filled with qualified young men. This presents a wonderful opportunity to those individuals willing to apply themselves and learn the trade.

### Job Description

The carpenter will generally perform general work involved in erecting wooden building frames, installing exterior and interior trim, laying floors, building concrete forms, pouring chutes, wooden scaffolds, and similar work requiring the cutting, shaping, and fastening together of wood or material, such as fiberboard, that is treated and used the same as wood.

Occupational opportunities will be found with private builders, residential builders, general contractors, cabinet shops, and in many industries that maintain their own building.

## CARPENTRY AND CABINET MAKING

### SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>			<u>Course Hrs. Per Wk.</u>		<u>Quarter</u>	
				Shop	Hours	
<u>FIRST QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Prac.</u>	
					<u>Credit</u>	
DD	121	Blueprint Reading	3	0	0	3
MA	120	Mathematics (Geometry)	5	0	0	5
ENG	101	Reading Improvement	2	0	0	2
CAR	110	Cabinet Making I	5	0	10	8
			15	0	10	18

### SECOND QUARTER

DD	122	Blueprint Reading	3	2	0	4
MA	120	Mathematics (Geometry)	3	0	0	3
CAR	111	Masonry	3	0	5	4
CAR	112	Cabinet Making II	3	0	6	5
CAR	113	Carpentry I	2	0	3	3
			14	2	14	19

### THIRD QUARTER

DD	127	General Drafting	2	3	0	3
MA	123	Mathematics (Trig.)	5	0	0	5
CAR	114	Plumbing	2	0	3	3
CAR	115	Cabinet Making III	3	5	0	4
CAR	116	Carpentry II	3	0	4	4
			15	8	7	19

### FOURTH QUARTER

CAR	117	Materials and Finishes	2	0	3	3
CAR	118	Cabinet Making IV	2	0	6	4
CAR	119	Carpentry III	4	0	11	7
SOC	101	Human Relations	2	0	0	2
			10	0	20	16

# GENERAL MAINTENANCE MECHANIC

## INTRODUCTION

### Purpose of Curriculum

Recent surveys by industrial and governmental agencies in North Carolina have shown a marked shortage of apprentices and other trainees in many trades. This shortage is notably true in the maintenance mechanic trade.

To meet the training needs of those planning to enter, or who have already entered this trade, this curriculum guide has been prepared. The variety of skilled operations and trade activities to which the student will be exposed should prove most valuable as he enters the trade.

The training processes outlined are not intended to replace the apprenticeship, but rather to provide industry with men ready to learn and with the background to become skilled maintenance mechanics. It is believed that this training should provide the enriched trade-training program needed in modern industry.

### Job Description

The graduate of the maintenance-mechanic trade program will be qualified to enter modern industry and participate in the overall plant maintenance as an on-the-job trainee, or apprentice, where he will assist in the maintenance of machinery, electrical systems, welding, carpentry, and many other areas in the overall industrial operation. The graduate will be qualified in the overall maintenance of residential, commercial, school, or industrial plants.

## GENERAL MAINTENANCE MECHANIC

### CURRICULUM

No definite curriculum has been established at this time, but instruction in the following areas will probably be covered in the curriculum:

- Electricity
- Electronic Installation
- Safety
- Blue Print Reading
- Shop Math
- A. C. Circuits and Controls
- D. C. Power Control and Operation
- Welding
- Carpentry
- Lubrication
- Pneumatic Installation
- Mechanical Practices
- Operation of Machine Tools
- Hand Tools
- Machinery Operation
- Mechanical Operations

# MASONRY

## INTRODUCTION

### Purpose of Curriculum

The demand and the necessity for shelter, which is equaled only by the demand and necessity for food, means that the masonry trade offers assurance of permanent employment. The masonry trade is, therefore, essential to the well-being and advancement of mankind.

This course is designed to prepare students who are vocationally competent to take their places in the labor market along with journeymen brickmasons. The length of this course is to be 4 quarters.

Any student accepted for this course should be capable of successfully completing the course, and he should be able to progress on the job after employment. There should be a close mutual relationship between the school administration, and members of the Craft Committee for masonry work to assure adequate trade preparatory training to meet local needs in the masonry trade.

### Job Description

The objectives of this course are:

To develop within the student the correct habits and techniques of using all masonry tools and of mixing mortar.

To develop work habits and to teach proper safety procedures the student will use in the trade.

To teach technical knowledge through related subjects as well as the manipulative skills in the masonry trade.

To present a variety of experiences and problems in order to develop the student's ability to cope with the practical problems which will be encountered in the trade.

# MASONRY

## SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>			<u>Course Hrs. Per Wk.</u>		<u>Shop</u>	<u>Quarter</u>
			<u>Class</u>	<u>Lab.</u>	<u>Prac.</u>	<u>Hours</u>
<u>FIRST QUARTER</u>						
MAS	121	Shop Theory and Practice	4	0	10	7
MA	120	Fundamentals of Mathematics	5	0	0	5
DD	122	Blue Print Reading	5	0	0	5
			14	0	10	17

### SECOND QUARTER

MAS	122	Shop Theory and Practice	5	0	15	10
MA	121	Fundamentals of Mathematics	3	0	0	3
DD	123	Blue Print Reading	3	0	0	3
			11	0	15	16

### THIRD QUARTER

MAS	123	Shop Theory and Practice	3	0	20	10
SOC	101	Human Relations	2	0	0	2
			5	0	20	12

### FOURTH QUARTER

MAS	124	Shop Theory and Practice	3	0	20	10
SOC	103	Management Procedures	3	0	0	3
			6	0	20	13

# PRACTICAL NURSE EDUCATION

## INTRODUCTION

### Purpose of Curriculum

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand an increased number of well-trained personnel for health services. Realizing this need, the State Department of Community Colleges, in conjunction with local hospitals, administers programs of practical nurse education in local school systems, community colleges, technical institutes, and in industrial education centers throughout the state.

The aim of the Practical Nurse Education Program is to make available to qualified persons the opportunity to prepare for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Students are selected on the basis of demonstrated aptitude for nursing as determined by pre-entrance tests, interviews with faculty members, high school record, character references, and reports of medical and dental examinations.

Throughout the one-year program, the student is expected to grow continuously in acquisition of knowledge and understandings related to nursing, the biological sciences, the social sciences, and in skills related to nursing practice, communications, interpersonal relations, and use of good judgment. Evaluation of student performance consists of tests on all phases of course content, evaluation of clinical performance, and evaluation of adjustment to the responsibilities of nursing. A passing score is required on all graded work, plus demonstrated progress in application of nursing skills to actual patient care.

## Job Description

Graduates of accredited programs of practical nurse education are eligible to take the licensing examination given by the North Carolina Board of Nursing. This examination is given twice each year, usually in April and September. A passing score entitles the individual to receive a license, and to use a legal title "Licensed Practical Nurse." The license must be renewed annually. The Licensed Practical Nurse can apply for licensure in other states on the basis of a satisfactory examination score, without repeating the examination.

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices, and, in some localities, public health facilities. In all situations, the LPN functions under supervision of a registered nurse and/or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understandings of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

PRACTICAL NURSE EDUCATION

SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>	<u>Course Hrs.</u>	<u>Per Wk.</u>	Quarter Hours
<u>FIRST QUARTER</u>	<u>Class</u>	<u>Lab.</u>	<u>Clinic</u> <u>Credit</u>
Practical Nursing I	18	2	3 20
<u>SECOND QUARTER</u>			
Practical Nursing II	12	2	21 20
<u>THIRD QUARTER</u>			
Practical Nursing III	10	2	24 19
<u>FOURTH QUARTER</u>			
Practical Nursing IV	10	2	24 <u>19</u>
			78

## PRODUCTION ASSISTANT

(Furniture Option)

### INTRODUCTION

#### Purpose of Curriculum

The furniture industry is one of North Carolina's largest employers. With the exception of textiles, it provides more job opportunities than any other industry in this State. The concentration of this industry in some areas of this State places a heavy demand on the working forces of those areas. The available supply of workers with a knowledge of furniture manufacturing and with skills in the various trades of the industry is soon exhausted. Herein is a curriculum for use in the areas where the furniture production assistant is in demand. This curriculum serves as a guide providing for such variations as may best serve industry of the area involved.

This curriculum provides the necessary training for a person to enter the furniture industry on a semi-skilled level in the production area. This training is to be accomplished through practical experiences in the several shop courses, with essential background information in the theory of materials, machines, and techniques common to the industry in order to insure his functional understanding with resulting efficiency and progress in his work.

#### Job Description

This program is developed to train the student in production techniques of the industrial plant. The theory and related information included are to provide the student with the information which will assist him in the advancement into more responsible positions of the industry.

PRODUCTION ASSISTANT

Furniture Option

(Tentative Courses)

Prerequisite: Pass reading proficiency test.

SUGGESTED CURRICULUM BY QUARTERS

<u>Course Title</u>		<u>Course Hours</u>		<u>Quarter</u>
		<u>Per Week</u>		<u>Hours</u>
<u>FIRST QUARTER</u>		<u>Class</u>	<u>Lab.</u>	<u>Credit</u>
101	Engineering Drawing	0	6	2
103	Industrial Math	4	0	4
105	Characteristics of Wood	3	3	4
107	Characteristics of Finishes	1	3	2
110	Cost Records	2	0	2
102	Sketching	0	6	2
		10	18	16
<u>SECOND QUARTER</u>				
104	Physics, Mechanics, Strength Materials	3	1	4
106	Characteristics of Glue	2	0	2
111	Cost Estimates	3	0	3
108	Time Study	3	3	4
115	Construction and Billing	2	6	4
		13	10	17
<u>THIRD QUARTER</u>				
109	Predetermined Time Standards	2	3	3
116	Routing and Process Sequences	1	3	2
113	Quality Control	3	0	3
114, 112	Cost and Production Control	2	3	3
117, 118, 119	Cost Reduction	3	3	4
		11	12	15

## WELDING

### INTRODUCTION

#### Purpose of Curriculum

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed Manpower Survey shows quite clearly that many welders will be needed annually to fill present and projected vacancies in the State.

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques, and skills essential for successful employment in the welding field and metals industry.

The field of welding offers a person prestige, security, and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production shop, job shop, and many others.

#### Job Description

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding metals, arc, gas, and resistance welding are the three most important.



The principle duty of the welder using manual procedure is to control the melting by directing the heat, from either an electric arc or gas welding torch, and to add filler metal where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

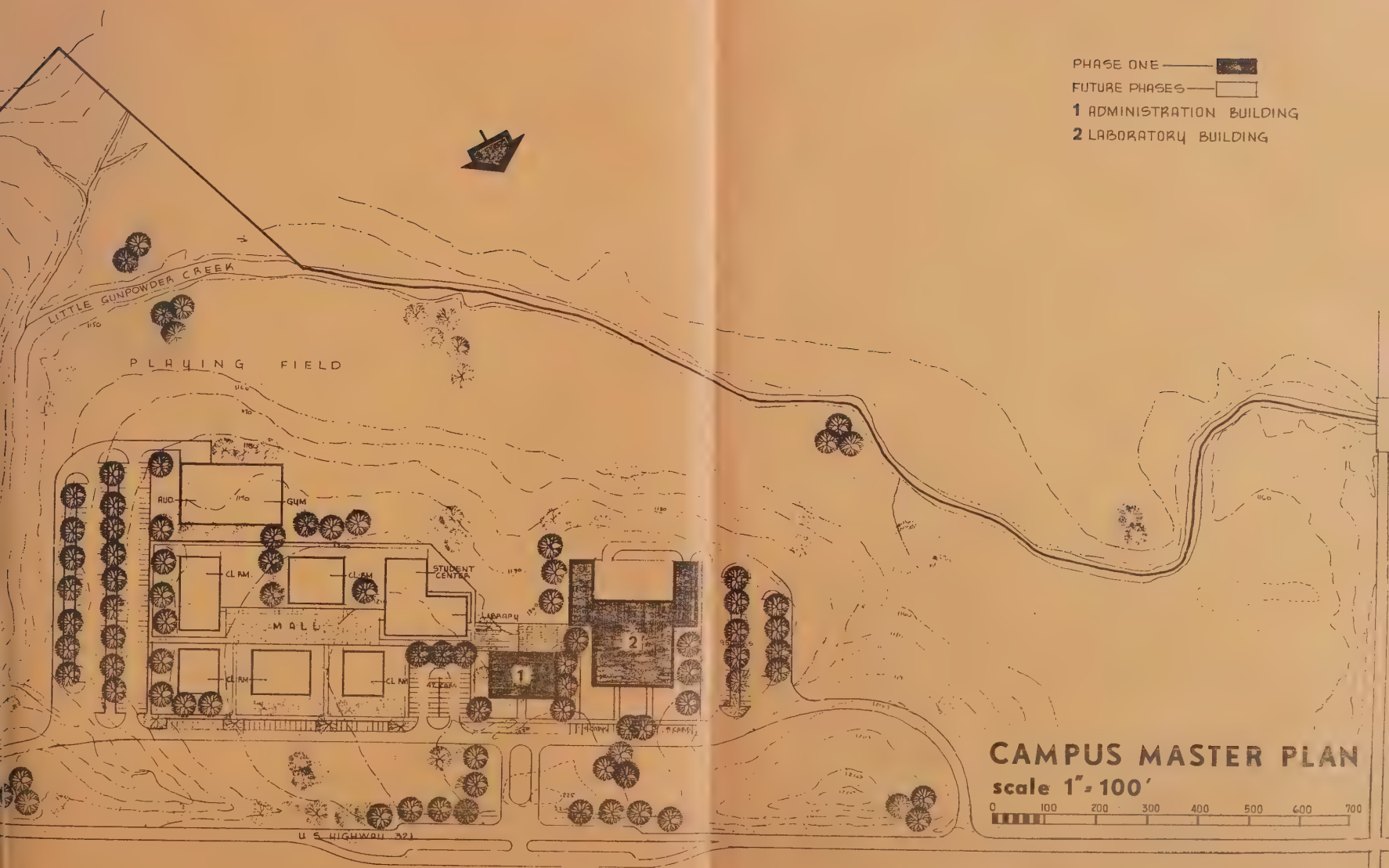
## WELDING

### SUGGESTED CURRICULUM BY QUARTERS

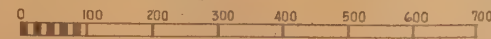
<u>Course Title</u>			<u>Course Hrs.</u>	<u>Per Wk.</u>	<u>Quarter</u>	
					Shop	Hours
<u>FIRST QUARTER</u>			<u>Class</u>	<u>Lab.</u>	<u>Prac.</u>	<u>Credit</u>
MA	120	Fundamentals of Mathematics	5	0	0	5
MECH	124	Structure of Metals	3	2	0	4
WELD	110	Hand and Power Tools	0	0	3	1
DD	122	Blueprint Reading	5	0	0	5
WELD	120	Oxyacetylene Welding and Cutting	3	0	9	6
			16	2	12	21
<u>SECOND QUARTER</u>						
ENG	101	Reading Improvement	2	0	0	2
MA	121	Geometry	3	0	0	3
DD	127	Blueprint Reading	3	0	0	3
ELEC	117	Basic Electricity	3	0	0	3
WELD	111	Arc Welding	3	0	12	7
			14	0	12	18
<u>THIRD QUARTER</u>						
WELD	112	Mechanical Testing and Inspection	0	0	6	3
SOC	101	Human Relations	2	0	0	2
WELD	113	Inert Gas Welding	1	0	3	2
WELD	114	Introduction to Pipe Welding	3	0	12	7
SOC	105	Industrial Economics	3	0	0	3
			9	0	21	17



- PHASE ONE — 
- FUTURE PHASES — 
- 1 ADMINISTRATION BUILDING
- 2 LABORATORY BUILDING



**CAMPUS MASTER PLAN**  
scale 1" = 100'





SPECIALIZED COURSES

(1 to 3 Quarters In Length)



## TEXTILE MANUFACTURING

These courses are designed to give a general background in the skills and knowledge involved in textile processes. The student will learn the technical and scientific points of each process. Instruction will include the mechanics of each machine, the relation of one part to another, the function of each part, and machine operators' duties. Calculations including draft, twist, and production for the different machines, will be stressed. Courses available in this field are:

Introduction to Textiles	Textile Mathematics
Reading Improvement	Weaving
Yarn Manufacturing	Technical Report Writing
Plant Visitation	Time and Motion Study
Communication Skills	Loom Fixing
Industrial Organization Management	

## FURNITURE MANUFACTURING

These courses provide the necessary training for a person to enter the furniture industry on a semiskilled level in one or more areas: machining, sanding and assembling, or finishing. This training is to be accomplished mainly through practical experiences in the shop courses, with essential background information in the theory of materials, machines, and techniques common to the industry. The theory and related information included in the program are to provide the student with the information which will assist him in the advancement into more responsible positions of the furniture industry.

## CARPENTRY

These courses are designed to subject a student to the fundamentals of carpentry work and the basic procedures of cabinet making. Students will begin with hand tools, and progress into the woodworking machines found in a cabinet shop. The carpentry work will begin with the masonry foundation, and progress to the finished building. Some consideration will be given to industrial buildings, as compared to residential buildings.



## COURSE DESCRIPTIONS



## COURSE DESCRIPTIONS

(Note: Figures in Parenthesis Represent Quarter Hours)

### AUTOMOTIVE MECHANICS (AHR)

#### AHR 101 Automotive Air Conditioning (3)

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.

Prerequisite: PHY 105.

#### AUTO 121 Automotive Engines (7)

Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in automotive repair work. Study of the construction and operation of components of automotive engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing.

Prerequisite: None.

#### AUTO 122 Automotive Electrical and Fuel Systems (7)

A thorough study of the electrical and fuel systems of the automobile. Battery-cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system.

Prerequisite: AUTO 121.

### AUTO 123 Automotive Chassis and Suspensions (7)

Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, steering, and braking systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, front end, types and servicing of brakes.

Prerequisite: AUTO 122.

### AUTO 124 Automotive Power Train Systems (6)

Principles and functions of automotive power-train systems: clutches, transmission gears, torque converters, drive-shaft assemblies, rear axles, and differentials. Identification of troubles, servicing, and repair.

Prerequisites: PHY 105, PHY 106, AUTO 123.

### AUTO 125 Automotive Servicing (6)

Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of testing, adjusting, repairing, and replacing experiences.

Prerequisite: AUTO 123.

## BUSINESS ADMINISTRATION (BUS)

### BUS 301 Introduction to Business (3)

A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organization, and management.

Prerequisite: None.

### BUS 302 Typewriting (3)

Introduction to the touch typewriting system, with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

Prerequisite: None.

### BUS 303 Typewriting (3)

Instruction emphasizes the development of speed and accuracy, with further mastery of correct typewriting techniques.

These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Minimum speed of 40 net words per minute for five minutes.

Prerequisite: BUS 302 or a net speed of 30 words per minute for five minutes.

### BUS 304 Typewriting (3)

Emphasis on production typing problems and speed building.

Attention to the development of the student's ability to function as an expert typist, producing mailable copies.

The production units are tabulation, manuscript, correspondence, and business forms. Minimum speed of 50 net words per minute for five minutes.

Prerequisite: BUS 303 or a net speed of 40 words per minute for five minutes.

### BUS 306 Shorthand (3)

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. Minimum dictation rate of 40 words per minute on new material for five minutes.

Prerequisite: None.

### BUS 307 Shorthand (3)

Continued study of theory, with greater emphasis on dictation for transcription. Minimum dictation rate of 60 words per minute required for five minutes on new material.

Prerequisite: BUS 306 or a dictation rate of 40 words per minute on new material for five minutes.

### BUS 308 Shorthand (3)

Theory and speed building. Introduction to office-style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Minimum dictation rate of 80 words per minute required for five minutes on new material.

Prerequisite: BUS 307.

BUS 316    Retailing (3)

A study of the role of retailing in the economy, including development of present retail structure, functions performed, principles governing effective operation, and managerial problems resulting from current economic and social trends.

Prerequisite: None.

BUS 317    Sales Development (3)

A study of retail, wholesale, and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for, and execution of, sales demonstrations required.

Prerequisite: None.

BUS 320    Accounting (6)

Principles, techniques, and tools of accounting, for understanding of the mechanics of accounting - collecting, summarizing, analyzing, and reporting information about service and merchantile enterprises, to include practical application of the principles learned.

Prerequisite: None.

BUS 327    Advertising (4)

The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.

Prerequisite: None.

BUS 328    Business Insurance (3)

A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included.

Prerequisite: None.

### BUS 332 Sales Promotion Management (4)

The scope and activities of sales promotion, with emphasis on the coordination of advertising, display, special events, and publicity. External and internal methods of promoting business; budgeting, planning, and implementing the plan.

Prerequisite: BUS 327.

### BUS 333 Personnel Management (3)

Principles of human relationships; selection of personnel by interviewing and testing; and training of personnel.

Prerequisite: None.

### BUS 335 Business Management (3)

Principles of business management, including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business - qualifications and requirements.

Prerequisite: None.

### BUS 337 Wholesaling (3)

The development of wholesaling; present-day trends in the United States. A study of the functions of wholesaling.

Prerequisite: None.

### BUS 339 Marketing (3)

A study of the marketing structure within the framework of the U. S. economic system. It includes the study of the movement of goods from producer to consumer through various channels of distribution, the functions of marketing, the social and economic implications.

Prerequisite: None

### BUS 340 Secretarial Procedures (3)

Designed to acquaint the student with the responsibilities encountered by a secretary during the workday. These include the following: receptionist duties, filing, handling the mail, telephone techniques, travel information,

telegrams, office records, purchasing of supplies, office organization, and insurance claims.

Prerequisite: None.

BUS 350E Advanced Typewriting (Business) (3)

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, reports, and manuscripts.

Prerequisite: BUS 304.

BUS 350M Advanced Typewriting (Medical) (3)

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, reports, and manuscripts.

Prerequisite: BUS 304.

BUS 351 Business Law (3)

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, partnerships, corporations, and agencies.

Prerequisite: None.

BUS 352 Business Law (3)

Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights.

Prerequisite: BUS 351.

BUS 355 Interpreting Accounting Records (3)

Designed to aid the student in developing a "use understanding" of accounting records, reports, and financial statements. Interpretation, analysis, and utilization of accounting statements.

Prerequisite: BUS 320.

BUS 356 Dictation and Transcription (Business) (4)

Develops the skills of taking dictation and transcribing materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed.

Prerequisite: BUS 308.

BUS 356E Dictation and Transcription (Executive) (4)

Develops the skills of taking dictation and transcribing materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed.

Prerequisite: BUS 308.

BUS 356M Dictation and Transcription (Medical) (4)

Develops the skills of taking dictation and transcribing materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed.

Prerequisite: BUS 308.

BUS 357 Dictation and Transcription (Business) (4)

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business, technical, and professional offices.

Prerequisite: BUS 356.

BUS 357E Dictation and Transcription (Executive) (4)

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business, technical, and professional offices.

Prerequisite: BUS 356.

BUS 357M Dictation and Transcription (Medical) (4)

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business, technical, and professional offices.

Prerequisite: BUS 356.

BUS 358E Dictation and Transcription (Executive) (4)

Principally a speed-building course, covering materials appropriate to the course of study, with emphasis on neatness as well as accuracy.

Prerequisite: BUS 357.

BUS 358M Dictation and Transcription (Medical) (4)

Principally a speed-building course, covering materials appropriate to the course of study, with emphasis on neatness as well as accuracy.

Prerequisite: BUS 357.

BUS 360 Office Machines (3)

A general survey of the business and office machines.. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, calculator, and duplicating equipment.

Prerequisite: None.

BUS 361 Office Machines (3)

Instructions in the operation of the bookkeeping-accounting machines, card punch, card verifier, and the dictating and transcribing machines.

Prerequisite: BUS 360.

### BUS 364 Business Finance (3)

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of the organization, management, and financing of businesses.

Prerequisite: None.

### BUS 365 Business Finance (3)

An advanced course designed to give the student practical knowledge of the different kinds of stocks and bonds, mortgages, working capital, sinking funds, capitalization, sales of securities, surplus, and dividends.

Prerequisite: BUS 364.

### BUS 366 Budget and Record Keeping (3)

The basic principles, methods, and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record-keeping in order to evaluate the effectiveness of budget planning.

Prerequisite: BUS 320.

### BUS 368 Taxes (3)

Application of Federal and State taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance.

Prerequisite: None.

### BUS 370E Office Application (Executive) (6)

During the sixth quarter only, students are assigned to work in a business, technical, or professional office for six hours per week. The objective is to provide actual work experience for secretarial students, and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study.

Prerequisite: BUS 361.

BUS 370M Office Application (Medical) (6)

During the sixth quarter only, students are assigned to work in a business, technical, or professional office for six hours per week. The objective is to provide actual work experience for secretarial students, and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study.

Prerequisite: BUS 361.

BUS 371 Office Management (3)

Presents the fundamental principles of office management. Emphasis on the role of office management; office automation; planning, controlling, organizing, and actuating in office management.

Prerequisite: BUS 340.

BUS 372 Principles of Supervision (3)

Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work-force and the role of the supervisor. Methods of supervision are stressed.

Prerequisite: None.

BUS 383E Terminology and Vocabulary (Executive) (3)

To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices.

Prerequisite: BUS 307.

BUS 383M Terminology and Vocabulary (Medical) (3)

To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in professional offices.

Prerequisite: BUS 307.

BUS 384M Terminology and Vocabulary (Medical) (3)

Greater emphasis on an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in a professional office.

Prerequisite: BUS 383.

BUS 372 Principles of Supervision (3)

Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work-force and the role of the supervisor. Methods of supervision are stressed.

Prerequisite: None.

FURNITURE MANUFACTURING (CAB)

(Tentative Courses)

CAB 110 Case Goods Materials and Methods (3)

A comprehensive study of the materials and methods of the furniture-making trade. Woods, metals, plastics, and other materials used in making of case goods. Basic woodworking operations and methods of joining of wood. Appliques, edgings, and hardware will be included.

Prerequisite: None.

CAB 311 Wood Working Machinery and Equipment (3)

CAB 312 Processing of Woods Used in Furniture Construction (3)

The theories and techniques of converting raw wood into usable products by milling, veneering, turning, and chipping. Included is the processing of finished lumber, plywood, and other wood products.

CAB 313 Machining Woods Used in Furniture Making (2)

Practical exercises in the operation of the various types of machines.

CAB 314 Case Goods - Design and Construction (3)

Class discussions and reports.

CAB 315 Wood Working Machinery and Equipment (3)

Laboratory practice will be provided for practical work on the various types of machines found in a modern furniture plant.

CAB 316 Furniture Construction (Case Goods) (3)

Lecture and laboratory work on the design and construction of modern and period furniture. The course emphasizes construction features that are economical of labor and materials and are adaptable to mass production. The course covers the use of new engineering materials and their effect on furniture construction.

Prerequisites: CAB 310, DD 308.

CAB 317 Finishing Techniques (3)

Theory and practice in the application of modern furniture finishes

Prerequisite: CHEM 301.

CAB 324 Cooperative Plant Training

(One hour lecture and 15 hours plant training per week) (6)

CARPENTRY AND CABINETMAKING (CAR)

CAR 110 Cabinetmaking I

This course is designed to introduce the student to hand tools used in a cabinet shop. After several projects with hand tools, the student will be placed on each machine. Various types of wood will be used, and identification of the various types of wood will be required.

CAR 111 Masonry

The student will study the various types of masonry construction and the types of masonry materials on the market today. Framing, for chimney construction, ceramic floors and

walls, flues, will be presented. Form-work for concrete walls, pillows, floors, foundations, driveways, and patios will be practiced. A study of the various mixtures of concrete and mortar mix will be studied.

#### CAR 112 Cabinetmaking II

This course will go into the necessary framing for cabinet work. Students will be presented a study of built-in cabinets and pre-constructed cabinet work. Built-in book cases and special work will be presented.

#### CAR 113 Carpentry I

This course will be presented as an introduction to the first steps necessary, from the finished foundation to the complete framing of a building. Methods of framing entire walls before erection will be presented. Motion-saving methods and over-all planning of time will be presented. Size of nails and identification of nails will be studied.

#### CAR 114 Plumbing and Heating Systems

This particular course is designed to help the carpenter understand the types of plumbing and heating systems that are used in modern building construction. The requirements to special framing on the part of the carpenter will be practiced.

#### CAR 115 Cabinetmaking III

This course will progress into the various woods used in cabinetmaking. Drawers, doors, hardware, and cornice work will be practiced. Methods of finishing and types of finishes will be studied.

#### CAR 116 Carpentry II

In this course, the students will study all types of roof construction. Each student will be required to cut and assemble all types of rafters. Students will be required to put on all types of shingles and prepare a roof for "built-up construction". The students will also be required to study the framing square in order to figure the length of rafters and other materials.

### CAR 117 Materials and Finishes

This course will present an identification and selection of materials. Methods and types of external finishes will be presented. Types of doors, windows, and external siding will be presented. Each student will be required to frame, stop, and lock, doors and windows.

### CAR 118 Cabinetmaking IV

This is a study of the type of materials used on tops and other finished areas. Each student will study built-in appliances such as stoves, ovens, dishwashers, and refrigerators. Finished cornice and standard measurements of all cabinet work will be presented.

### CAR 119 Carpentry III

This course will present the student with the finish work of carpentry. Types of baseboard, moulding, door facing, and framing and finishing staircases will be presented. Each student will be subjected to a series of projects under close supervision that will require use of all finishing tools normally used by a carpenter. Clean work and self-pride will have an emphasis in this course.

## CIVIL ENGINEERING (CIV)

### CIV 101 Surveying (3)

Basic instrumentation and topography will be studied, together with field trips and drafting-room application of site surveying.

Prerequisite: MA 104.

## COSMETOLOGY (COS)

### COS 101 Introduction to Cosmetology

This course gives the student a background for the profession, and an understanding of the responsibilities involved.

### COS 102    Personality

This course is to develop a pleasing personality and charm necessary to everyone in the beauty field.

### COS 103    Bacteriology

A study of bacteria helps to give a background for preventing the spread of disease in the shops.

### COS 104    Sterilization

This is an integral part of the complete training program, consisting of instruction in sanitary measures.

### COS 105    Anatomy

Knowledge of the structure and functions of the human body forms the scientific basis for treatment.

### COS 106    Chemistry

This subject has a direct bearing upon beauty shop work, so the cosmetologist should become familiar with the fundamentals of chemistry.

### COS 108    Hair, Shampoo, and Rinse

Hair - 7 hours. The study of hair is of paramount importance to the hairdresser. The student learns its structure, characteristics, and qualities.

Shampoo - 8 hours. This course covers the practical training necessary to develop the manipulative skill for shampooing.

Rinses - 7 hours. The student becomes familiar with the application of rinses and mixing colors.

### COS 109    Scalp Treatment

A practical course in which the student becomes skilled in treating scalp and hair conditions.

### COS 110    Haircutting

Skill in the use of scissors and razors for shaping the hair is developed in this course.

### COS 111    Hairstyling

Students receive training and obtain extensive practice in the proper use of pin curls, brushing, combing.

### COS 112    Permanent Waving

The student learns the method of permanent waving as well as analysis of hair.

### COS 113    Tinting and Bleaching

Tinting - 20 hours. This is a fundamental course in application of various shades of color to all textures of hair.

Bleaching - 25 hours. Includes all methods of removing color from the hair.

### COS 115    Theory of Massage

Basic manipulations are learned and techniques are employed in beauty treatments.

### COS 116    Skin

Knowledge of structure, functions, and characteristics is given to aid students in administering study and hygienic care to skin.

### COS 117    Facials

Practice is given in the techniques of facial treatments for various types of skin and skin disorders.

### COS 118    Electricity and Electrolysis

A course which is essential in developing and understanding use of electrical equipment.

### COS 119 Nails

A study of the structure, functions, and disorders of nails is made.

### COS 120 Manicuring

The student learns the correct procedure for giving a manicure and the shaping of nails to suit individual.

### COS 121 Disorders of Skin, Nails, and Hair

The cause, identification, and treatment of common skin disorders and scalp diseases.

### COS 122 Management

In this course the student learns business principles, book-keeping, salesmanship, and psychology needed to operate a beauty shop.

### COS 107, 114, 123 Safety

The safety practices in beauty shops are learned in this course, and the application of first-aid in case of accident.

## DRAFTING AND DESIGN (DD)

### DD 105 Drafting Analysis (2)

The trainee will make an analysis of the various drafting-field options offered in the Center. This analysis will include selected reading assignments concerning the options. A study of the job descriptions concerning those areas in the Dictionary of Occupational Titles, a study of blueprints in the option fields, and preparation of sketches illustrating major differences in the types of drawings.  
Prerequisite: None.

### DD 120 Building Trades Blueprint Reading and Sketching (5)

Principles of interpreting blueprints and trade specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.  
Prerequisite: None.

### DD 121 Blueprint Reading (3)

Interpretation and reading of blueprints. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes.

Prerequisite: None.

### DD 131 Drafting (7)

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-stroke lettering, applied geometry, freehand sketching, consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principle views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time.

### DD 132 Drafting (7)

The trainee will study simple and successive revolutions, and their applications to practical problems. Selections and conventions will be studied, and both detail and assembly sections will be drawn. Intersections and developments will be studied by relating the drawing to the sheet-metal trades. Models of the assigned drawings will be made from construction paper, cardboard, or similar materials as a proof of the solution to the problems drawn.

Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced, and dimensioning and sectioning of oblique and axonometric pictorials will be done.

Prerequisite: DD 131.

### DD 135 Descriptive Geometry (3)

Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid-geometry theorems. Where applicable, each graphical solution shall be accompanied by the analytical solution.

Prerequisite: DD 131.

### DD 151 Electrical-Electronic Drafting (7)

A specialization course for electrical-electronic drafting students. Beginning with a review of lettering techniques in freehand and instrument lettering, and covering abbreviations; electrical, industrial, and electronic schematic symbols; waveform symbols; block and line diagrams; schematic diagrams; component drawings and layout diagrams; layout of printed circuits; and chassis developments and layouts.

Prerequisite: DD 132.

### DD 141 Architectural Drafting (7)

An introduction to architectural drafting. Further development of techniques in lettering, dimensioning, free-hand sketching and instrument drawing. Drawings of construction details, using appropriate material symbols and conventions. Working drawings, including plans, elevations, sections, scale details and full-size details will be prepared from preliminary sketches.

Prerequisite: DD 132.

### DD 142 Architectural Drafting (7)

Individual and group participation in the preparation of complete working drawings for a complex architectural structure. Study of drafting-room organization and relationships of personnel within the architectural office.

Prerequisites: DD 141, DD 143, DD 144.

### DD 143 Architectural Mechanical Equipment (3)

General study of heating, air-conditioning, plumbing and electrical equipment, materials and symbols. Building-

code requirements pertaining to residential and commercial structures. Reading and interpretation of working drawings by mechanical engineers.

Prerequisite: DD 132.

#### DD 144 Architectural Materials and Methods (4)

Materials used in the construction of architectural structures will be studied. Their economic values and limitations affected by locality, budget, and codes. Field trips to construction sites and study of manufacturer's specifications for materials. Standard sizes of structural materials and modular construction techniques.

Prerequisite: None.

#### DD 145 Specifications and Controls (3)

The purpose and writing of specifications will be studied, along with their legal and practical application to working drawings. Contract documents will be analyzed and studied for the purpose of client-architect-contractor responsibilities, duties, and mutual protection.

Prerequisites: DD 141, DD 143, DD 144.

#### DD 152 Electrical-Electronic Drafting (7)

The emphasis in this course will be on the pictorial drawings used in both the electronics and in the electrical power fields. Isometric drawings of electronic and electrical components: cable-formed wiring, wiring assemblies, chassis, chassis assemblies, cable assemblies, and component assemblies; electrical-power distribution systems, substation and power-line drawings in isometric and diagrammatic drawings. Architectural-electrical drawings: electrical plans, riser diagrams, and illumination plans. Graphs, charts, and diagrams pertaining to the electrical-electronics field will be included.

Prerequisite: DD 151.

### DD 161 Furniture Drafting (7)

An introduction to furniture drafting. Anatomical relationships influencing furniture construction and design. Furniture sizes and influencing factors. Construction details and standard furniture parts. Scale drawings and full-size drawings will be made. Dimensioning practices and notes will be studied.

Prerequisite: DD 132.

### DD 162 Furniture Drafting (7)

The "working drawing" will be studied, and a complete set of drawings will be made of a group of furniture. Related architectural considerations will be included. Notes and materials-list will accompany the set of drawings.

Prerequisites: DD 161, UPH 111, CAB 110.

### DD 163 Furniture Specifications (3)

Furniture specifications and billing of materials will be studied. Materials, fabrication, workmanship, finishes, crating, and shipping instructions will be included.

Prerequisites: DD 161, UPH 111, CAB 110.

### DD 164 Furniture Styling and Decoration (3)

A study of the periods and styles of furniture and of the factors which influenced their development. Methods of styling and decorating will be included along with basic principles of design.

Prerequisites: UPH 111, CAB 110.

### DD 301 Technical Drafting (4)

Introduction to drafting and design practices and principles. Attainment of basic skills and techniques of drafting; use of drafting equipment; lettering; freehand orthographic and pictorial sketching; geometric construction; orthographic instrument drawing of principal views; and standards and practices of dimensioning and noting. Methods of reproducing, filing, and storing drawings are studied, and the student is introduced to "working drawings."

### DD 302 Technical Drafting (4)

The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphical analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices, approved by the American Standards Association, in precision and limit dimensioning will also be included.

Prerequisite: DD 301.

### DD 303 Technical Drafting (4)

Intersections and developments and their practical solutions will be studied, and, where applicable, model solutions shall accompany the problems. The various types and methods employed to produce isometric and oblique drawings, isometric, dimetric and trimetric projections, and rendered pictorials will be included.

Prerequisite: DD 302.

### DD 304 Technical Drafting - Furniture (4)

A study of the anatomical relationships influencing furniture construction and design. Methods of detailing, general furniture sizes, standard parts, dimensioning and noting practices will be explored. Preliminary sketches, scale drawings, full-size drawings will be made.

Prerequisite: DD 303.

### DD 305 Design Drafting - Furniture (4)

Preliminary design sketches of both case goods and upholstered pieces will be carried through detail drawings, accompanied by specifications and bills of materials. Architectural considerations related to customer services and showroom planning will be studied.

### DD 306 Design Drafting - Furniture (8)

Research to solve the design problem of developing a correlated furniture group using charts, periodicals, lab experiments, and reference sources. A written report, preliminary design sketches, finished details, pictorial drawings, and specifications are required as a part of the problem.

### DD 307 General Drafting (3)

An introductory course in drafting for students needing a knowledge of drawing principles and practices for reading and describing objects in the graphic language. The student is expected to gain basic skills in drawing with instruments, lettering, geometrical constructions, freehand sketching, and describing objects orthographically with principle views. Freehand sketching and orthographic reading are to be emphasized.

Prerequisite: None.

### DD 308 General Drafting (3)

The student continues the study of orthographic projection with applications to orthographic instrument drawing. Dimensioning procedures and practices are emphasized, and the student is introduced to the "working drawing". Methods of describing complex objects with auxiliary views and/or sections and conventions are taught.

Prerequisite: DD 307.

### DD 310 Descriptive Geometry (4)

Graphic analysis of space problems involving points, lines, planes, connectors, and a combination of these. Practical design problems will be stressed, with analytical verification where applicable. Visualization shall be stressed on every problem.

Prerequisites: DD 302, MA 302.

### DD 314 Furniture Drafting (2)

An introduction to furniture drafting. Anatomical relationships influencing furniture construction and design.

Furniture sizes and influencing factors. Construction details, and standard furniture parts. Scale drawings and fullsize drawings will be made. Dimensioning practices and notes will be studied.

## DATA PROCESSING (DP)

### DP 311 Introduction to Data Processing Systems (4)

Fundamental concepts and operational principles of data-processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses.

Prerequisite: None.

## DESIGN TECHNOLOGY (DES)

### DES 304 Visual Design I (4)

This course is a study of the basic vocabulary of two-dimensional design; point, line, texture, value, and color. Application of this vocabulary in drawing and elementary design problems, leading to an understanding of two-dimensional form and space.

Prerequisite: None.

### DES 305 Visual Design II (4)

An extension of DES 304 dealing with basic problems in representing lines, planes, and solids in space; rendering techniques and culminating with the planning and organization of exhibits.

Prerequisites: DES 304, TD 304.

### FD 306 Styling (4)

A study of the periods and styles of furniture and the factors which influenced their development. Methods of styling and decorating will be included with basic principles of design.

### TD 304 Tectonic Design (4)

An exploration of three-dimensional design using a variety of materials for shaping, construction, and ornamenting.

## ELECTRICAL TECHNOLOGY (ELEC)

### ELEC 121    Electrical Machines and Controls (4)

An introduction to the construction, operation, and utilization of direct-current and alternating-current machines. Familiarization with the various types of machine-control devices.

Prerequisite: None.

### ELEC 122    Direct and Alternating Current (12)

A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analysis of direct-current circuits by Ohm's Law and Kirchoff's Law. A study of the sources of direct-current voltage potentials. Fundamental concepts of alternating-current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating-current circuits.

Prerequisite: None.

### ELEC 123    Alternating Current and Direct Current Machines and Controls (10)

Provides fundamental concepts in single and polyphase alternating-current circuits, voltages, currents, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances, such as: thermostats, times, or sequencing switches.

Prerequisite: ELEC 122, MA 125.

### ELEC 124    Residential Wiring (8)

Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications, such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups.

Prerequisites: ELEC 123, DD 120.

## ELEC 125   Commercial and Industrial Wiring (8)

Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems.

Prerequisite: ELN 118, ELEC 124.

## ELECTRONICS (ELN)

### ELN 118   Industrial Electronics I (6)

Basic theory, operating characteristics, and application of vacuum tubes, such as: diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes, and other basic applications.

Prerequisite: ELEC 123.

### ELN 119   Industrial Electronics II (8)

Basic industrial electronic systems, such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyatron tubes, and other basic types of systems commonly found in most industries.

Prerequisite: ELN 118.

### ELN 121   Electronic Fundamentals (4)

Basic electronic theory and practice with emphasis on component identification, color codes, schematics, layout techniques. Introduction to typical electronic systems as found in industry.

Prerequisites: PHY 105, ELEC 121.

## ENGLISH (ENG)

### ENG 101 Reading Improvement (2)

A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word-group recognition, and to train for comprehension in larger units. Reading faults of the individual are analysed for improvement, and principles of vocabulary building are stressed.

Prerequisite: None.

### ENG 102 Communication Skills (2)

Development of ability to communicate effectively through the medium of good language usage in speaking and writing. Organizing thoughts and presenting thoughts effectively in connection with problems.

Prerequisite: None.

### ENG 302 Communicative Skills: English (3)

Designed to aid the student in the improvement of self-expression in business and technical composition. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.

Prerequisite: None.

### ENG 304 Communicative Skills: Speech (2)

Technical speech to develop the speaking skills, with emphasis on the dual role of communications as both a speaking and listening skill. Stress is placed on growth in poise and confidence of the student. Practice through individual speeches and group discussion. Recordings are made of the student's voice and used as an aid in speech development.

Prerequisite: ENG 307.

ENG 305 Communicative Skills: Report Writing (3)

A study and practice in the fundamentals of report writing, including style and mechanics in preparing reports of various types, which are most likely to be used by people engaged in business and the professions.

Prerequisite: ENG 302.

ENG 306 Communicative Skills: Business Communications (3)

Develops skills in techniques in writing business communications. Emphasis is placed on writing action - getting sales letters and prospectuses. Business reports, summaries of business conferences, spot announcements for radio and television, as well as letters involving credit, collections, adjustments, complaints, orders, acknowledgments, remittances, and inquiry are also included in this course.

Prerequisite: ENG 305.

ENG 307 Communicative Skills: Oral Communications (3)

Includes study in areas of face-to-face conversation, delegating and accepting, understanding, listening, questioning, conferences, and the use of words.

Prerequisite: BUS 306.

ENG 313 Advertising Copywriting (3)

A study of the techniques used in creating effective advertising copy for various types of media; purposes and duties of the copywriter and legal problems encountered in copywriting. Theory and practice will be given in writing copy for the various media, including retail and fashion copy, mail order, direct mail, business publications, radio, and television.

Prerequisite: ENG 302.

## INDUSTRIAL SCIENCE (ISc)

### ISc 102 Industrial Organizations (3)

Methods, techniques, and practices of modern management in planning, organizing, and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost.

Prerequisite: None.

### ISc 301 Industrial Organization and Management (3)

Organizational structure for industrial management; operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting of markets, selection and layout of physical facilities; selection, training, and supervision of personnel as found in typical industrial organizations.

## MATHEMATICS (MA)

### MA 120 Fundamentals of Mathematics (5)

Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division.

Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.

Prerequisite: None.

### MA 121 Geometry (3)

Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures.

Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations.

Prerequisite: None.

### MA 124 Algebra (5)

Basic concepts and operations of algebra: historical background of our base-number system; algebraic operations: addition, subtraction, multiplication, and division; fractions, letter representation, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition and subtraction, substitution, graphing, exponents, logarithms, tables and interpolation.

Prerequisite: None.

### MA 125 Electrical Math (5)

A study of fundamental concepts of algebra; basic operations of addition, subtraction, multiplication, and division; solution of first-order equations, use of letters and signs, grouping, factoring, exponents, ratios, and proportions; solution of equations, algebraically and graphically; a study of logarithms and use of tables; and introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current.

Prerequisite: None.

### MA 126 Trigonometry (3)

Trigonometric ratios; solving problems with right triangles; using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations.

Prerequisites: MA 121, MA 124.

### MA 303 Technical Mathematics (3)

Ideas of algebra are used in a study of trigonometric, logarithmic and exponential functions. Selected applications of calculus reinforce this approach. Polar coordinates are introduced and their applications expanded. Complex numbers, vectors, coordinate systems and their applications constitute other areas of study.

Prerequisite: MA 302.

### MA 310 Business Mathematics (3)

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

Prerequisite: None.

### MASONRY (MAS)

#### MAS 121 Shop Theory and Practice (7)

This unit provides an introduction to the masonry trade. An introduction to the practical masonry tools is provided covering the identification, proper use, and care. The fundamentals of trowel manipulation in pick-up, spreading, troweling, and cutting mortar will be taught. Shop practice is gained by working on 4" projects dealing with placing, racking, jamming, and toothing of bricks. Safety will be emphasized in all shop instruction and practice.

#### MAS 122 Shop Theory and Practice (10)

The student will construct block, brick veneer, and block and brick walls in the basic bonds. Additional practice in the making of 8" and 12" corner constructions and the continuous line drills will be provided. The layout of a building, the footings, the foundation walls, and the footing anchorage will be taught and practice given.

#### MAS 123 Shop Theory and Practice (10)

Instruction and practice will be given the construction of veneer, cavity brick-faced tile, and structural tile walls. The construction of arches and lintels, along with additional practice in building 16" and 12" corner leads and walls with door and window openings will be covered. Instruction and practice will be given in constructing block and corner leads with 4", 6", 8", and 12" concrete and cinder blocks.

## MAS 124 Shop Theory and Practice (10)

After the information lessons on the following, the student will construct one or more fireplaces, mantels, chimneys, flues, glass block panels, steps, walkways, patios, and circular masonry work.

## MECHANICAL (MECH)

### MECH 112 Welding (1)

Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work.

Prerequisite: None.

### MECH 113 Shop Processes (3)

Study of practices used in metalworking shops; introduction to how materials can be utilized, and to the processes of shaping, forming, and fabricating of metals. Demonstration of the metalworking lathes, grinders, drills, milling machines, shapers, planers, saws, broachers, gear-cutting machines, and finishing machines. A study of the capabilities of these machines.

Prerequisite: None.

### MECH 119 Sheet Metal Shop Processes (3)

An introductory course in sheet metal fabrication. Safety, sheet-metal hand tools, cutting and forming machines, fastening and fabrication methods, layout methods, and development of metal chassis. Properties of sheet metals.

Prerequisite: DD 113.

MM 306 Upholstery Materials and Methods (3)

Types of materials used in upholstering and construction methods which affect the design of furniture, materials characteristics, fastening methods, accessory materials, frame types and construction are included in this course. Prerequisite: None.

PHYSICS (PHY)

PHY 104 Applied Physics I (2)

Introductory physics and its applications. Systems of measurement, theory of matter, properties of solids, liquids, and gases. Prerequisite: None.

PHY 105 Applied Physics II (2)

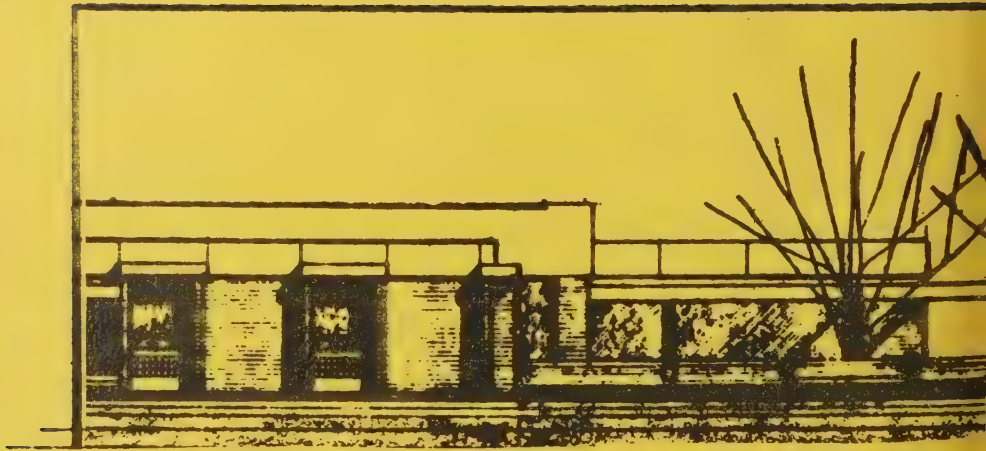
Basic principles of electricity, types of electricity, and its production, transmission, and transformation. Such factors as the electron theory, electrical measurement, magnetism, electromagnetism, and the magnetic effects of electricity, constitute major areas of study. Prerequisite: PHY 104.

PHY 106 Applied Physics III (2)

Physical principles of force, energy, work, and power; equilibrium and the laws of motion; principles of machines, mechanical advantage, and transmission of power in practical applications and the use of vectors and graphical presentations. Prerequisites: PHY 104, MA 120.



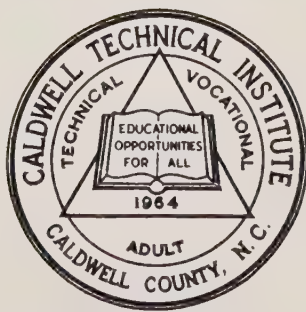




# CALDWELL TECHNICAL INSTITUTE

BOX 600 / LENOIR, NORTH CAROLINA 28645

# CALDWELL Technical Institute

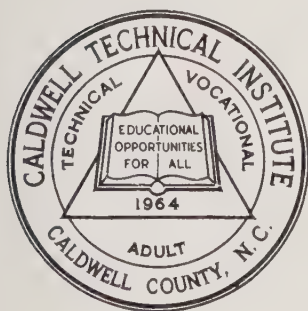


CATALOG  
1966-1967



# Caldwell Technical Institute

**GENERAL CATALOG**  
**1966 - 1967**



LENOIR, NORTH CAROLINA

Volume 1, No. 1. June 1966

Entered as Third Class Matter  
in Post Office at Lenoir, N. C.

Students having questions not answered in this publication may obtain further information from the Student Personnel Office, Caldwell Technical Institute, Box 600, Lenoir, North Carolina 28645.

Caldwell Technical Institute is a comprehensive public Technical Institute operating under the North Carolina Department of Community Colleges. The institute is approved by the North Carolina State Board of Education.

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# ACADEMIC CALENDAR

## 1966 - 1967

### FALL QUARTER

#### 1966

September 6 and 7..... Registration  
 September 8..... Classes Begin  
 November 23..... Fall Quarter Ends  
 Thanksgiving Holidays — November 24 and 25.

### WINTER QUARTER

#### 1966

November 28 and 29..... Registration  
 November 30..... Classes Begin  
 February 24..... Winter Quarter Ends  
 Christmas Holidays — December 21 - January 1, 1967

### SPRING QUARTER

#### 1967

March 1 and 2..... Registration  
 March 6..... Classes Begin  
 May 23..... Spring Quarter Ends  
 Easter Holidays — Friday, March 24  
 Easter Monday, March 27

### SUMMER QUARTER

#### 1967

June 5 and 6..... Registration  
 June 7..... Classes Begin  
 August 23..... Summer Quarter Ends  
 Holiday — July 4

# A Message from the President

The Caldwell Technical Institute was founded upon the premise that it should become a “community school,” offering programs at all levels to the extent of its legal authority, to all races, and to both sexes.

This commitment is being carried out and planned for through adult basic education courses for those who have not learned to read and write or who did not complete the eighth grade, through courses designed to help persons who did not graduate from high school prepare themselves to take the high school equivalency exam, through courses and workshops designed to enable persons to live a fuller life and to solve problems that confront them, through extension courses designed for employed persons to improve their skills while continuing their employment, and through curriculum programs announced in this catalog which are designed to prepare persons for initial employment.

The announcements herein result from our commitment as a “community school,” for hundreds of lay and professional citizens in Caldwell County have helped to analyze our needs and to design courses and programs to meet them.

It is our purpose to provide the highest quality programs possible at a cost which our citizens can afford.

H. Edwin Beam  
President

**BOARD OF TRUSTEES**

John A. Forlines, Jr., Chairman  
Lloyd M. Rash, Vice-Chairman  
Mrs. Barbara Deverick, Secretary  
Myron L. Moore, Jr., Treasurer

E. M. Dudley	Walter T. Carpenter, Jr.
M. L. DeVane	Ray Chapman
Granville C. Myers	Clarence A. Braswell
C. W. Porter	

**ADMINISTRATIVE STAFF**

H. Edwin Beam	President
B. S., (N. C. State University); M. Ed., (N. C. State University); Ed. D., (University of North Carolina).	
Joe R. Clary	Director of Instruction
B. S., (N. C. State University); M. Ed., (N. C. State University); Ph.D., (The Ohio State University).	
Rex G. Sigmon	Director of Student Personnel
A. B., (Lenoir Rhyne College); M. A., Appalachian State Teachers College); Ed. S., (University of Texas), additional graduate work (University of Wyoming).	
Richard L. Waldroup	Director of Techincal and Vocational Education
Apprentice Toolmaker (textile machine works); Associate Applied Science (Wyomissing Polytechnic Institute); B. S. (N. C. State Uni- versity); Graduate work (N. C. State University).	
Mrs. Helen J. Hatley	Bookkeeper
Mrs. Julia D. Alexander	Secretary
Mrs. Frances P. Blalock	Secretary
Miss Frances Robbins	Secretary

# Introduction to Caldwell Tech

Several historical events are important in the development of the Caldwell Technical Institute.

The 1963 North Carolina General Assembly passed the Community College Act creating a system of comprehensive community colleges, technical institutes, and industrial education centers in the State under the State Board of Education.

In January, 1964, the Caldwell Technical Institute was tentatively approved by the State Board of Education. On March 28, 1964, the people of Caldwell county approved the institution through a bond note of \$600,000 for the purchase of the site and construction of the facilities and up to 5 cents tax authorization for operating the institution. Final approval by the State Board of Education followed on April 2, 1964.

The president was selected in October, 1964. The site was selected in January, 1965. Selection of the architect was made in February, 1965.

## LOCATION

The Caldwell Technical Institute is to be located on Highway 321, approximately five miles south of Smith Crossroads. The Institute property adjoins the Hudson High School property.

Since the Institute buildings will not be ready for occupancy by September, 1966, classes will begin in temporary quarters, located 2 miles South of Lenoir on the Miller Hill Road No. 1146, and the former Bush Oldsmobile building at Smith Crossroads, Lenoir.

## AREAS OF STUDY

### Technical Curricula

All technical curricula operate on a full-time two-year program basis. These programs emphasize theory more heavily than do vocational programs and consist of highly specialized occupational areas.

Technical curricula expected to be offered by the Caldwell Technical Institute for the 1966-1967 Academic year include:

Business Administration  
Executive Secretary  
Medical Secretary

Furniture Drafting and Design  
Library Assistant

Graduates of these programs will be awarded the Associate in Applied Science Degree.

### Vocational Curricula

Vocational programs are generally for one year or less in duration. Emphasis is given to specific manipulative skills or application of understanding. Some knowledge of mathematics, the sciences, and communicative skills is also required.

Vocational programs expected to be offered by the Caldwell Technical Institute for the 1966-1967 Academic year include:

Automotive Mechanics  
Carpentry  
Cosmetology  
Mechanical Drafting  
Electrical Installation  
and Maintenance

Furniture Drafting  
Maintenance Mechanic  
Masonry  
Practical Nurse Education  
Production Assistant (Furniture)  
Welding

Graduates of these programs will be awarded a diploma by the Caldwell Technical Institute.

## AREAS OF STUDY NON-CURRICULUM OFFERINGS

### Extension Offerings

The Caldwell Technical Institute will offer annually a number of courses by extension for those persons who are employed, and who wish to upgrade their occupational levels.

Extension courses will be offered in the late afternoons and evenings, and may be offered in certain surrounding communities as well as on the campus.

Many of the extension courses will be the same general nature as those included in the one and two-year curriculum programs. Others will be for specific purposes of pre-employment or up-grading training to meet needs not necessarily met through curricular offerings.

Extension courses will be announced well in advance of the beginning dates.

Examples of extension offerings of a non-curriculum nature which could be offered include:

Creative Salesmanship	Firemanship Training
Advertising	(Series of Courses)
Personality Development	Nurses' Assistant Training
Accounting	Oral Communications
Bookkeeping	Principles of Supervision
Business Machine Operation	(Series of Courses)
Rapid Writing	Job Instruction Training
Principles of Management	Industrial Psychology
(Series of Courses)	Small Appliance Servicing and Repair

A certificate will be awarded for the satisfactory completion of each course offered by extension.

### General Adult Education and Community Service Programs

Adult and community services programs will normally consist of non-credit courses that lead to no degree or diploma. However, a certificate will be awarded for the satisfactory completion of each adult or community service program.

Examples of types of offerings in this category follow:

Social Security	Personal Investments
Law for the Layman	Interior Decoration
Personal Income Tax	Home Appliance Repair

Pre-school Problems  
 Human Relations  
 North Carolina History  
 First Aid  
 Public Speaking  
 Rapid Reading  
 Personal Typing

Business Law  
 Discussion Groups:  
 Great Decisions  
 Great Books  
 You and Your Community  
 Aging and You  
 World Politics

### **Adult Basic Education**

Adult basic education programs are designed for adults who did not go to school, or who dropped out before completing the eighth grade.

Classes are offered on the 0-4 level and on the 5-8 level. Approximately 150 class hours (or six months) are required to complete each level.

### **Adult High School Equivalency Program**

The adult high school equivalency program is a cooperative program between local school administrative units and the Caldwell Technical Institute to provide the necessary instruction which will enable the adult student to take the State high school equivalency exam.

The curriculum includes classes in English, mathematics, science, and social studies.

### **Others**

Cultural events of various kinds will be sponsored by Caldwell Technical Institute each year. These will be announced well in advance, open to the public, and generally free of charge. Certain types of events may, however, require charging a nominal admission fee.

## **ADMISSIONS**

### **ADMISSION REQUIREMENTS**

The Caldwell Technical Institute is a co-educational institution open to any individual meeting the admission requirements for the particular course or area in which he wishes to enroll. These requirements vary with the areas of study offered by the Institute.

All applicants for the **technical curriculum** must be high school graduates, or be eighteen years of age or older and possess a high school equivalency certificate. The applicant must have satisfactorily completed at least two years of high school mathematics, preferably one year of algebra and one year of geometry. Physics and chemistry are also desirable courses for the technical program applicant to have completed.

Applicants for the **vocational curriculum** programs should also be high

school graduates or equivalent; however, an applicant may be accepted in a vocational curriculum who possesses maturity, mental growth, attitudes, aptitudes, and interests necessary for success in the particular curriculum for which he is applying.

## **ADMISSION PROCEDURES**

### **(For One and Two-Year Programs)**

**1. Secure application form and make application for admission.** Application forms may be secured from your local guidance counselor or by writing the Caldwell Technical Institute, Box 600, Lenoir, North Carolina, or by calling telephone number 758-2306 in Lenoir or 396-3311 in Granite Falls. The application for admission should be very carefully and accurately completed and submitted to the Institute as early as possible to assure a place in the curriculum desired. Enrollment limits are set for almost all curriculum offerings.

**2. Submit the completed application.** There is no fee to be submitted with the application. A \$2.00 registration fee will be collected when registering.

**3. Submit a transcript of high school records and of any post-high school work taken.** These may be submitted at any time during the senior year in high school (if the applicant is still attending high school). An applicant meeting all other requirements will be given provisional acceptance pending receipt of his final grades from high school.

**4. Complete the General Aptitude Test Battery given by the North Carolina Employment Security Commission.** These tests are a requirement for admission to any institution under the North Carolina Department of Community Colleges. There is an Employment Security Commission Office in Lenoir where these tests may be taken.

**5. Arrange for an interview with the Director of Student Personnel or other representative of the Caldwell Technical Institute.** The interview is a requirement for completing the application process. The applicant may arrange for the interview through his guidance counselor, or by call in the Director of Student Personnel at 758-2306 in Lenoir or 396-3311 in Granite Falls. The interview may be arranged in the local school or in the temporary facilities of Caldwell Technical Institute.

### **Admission With Advanced Standing**

Students may be admitted with advanced standing by transfer from other technical institutes, colleges or universities. Credits transferred from another institution must be of "C" grade quality or higher, and parallel closely those offered by the Caldwell Technical Institute for the program in which the applicant desires advanced standing.

An official transcript must be submitted at least two weeks prior to registration day in order for advanced standing to be allowed.

Certain students may for reason of work experience or special high school preparation be allowed to take certain advanced courses instead of beginning at a lower level. These cases will be determined individually, and usually on the basis of a proficiency exam. Examples of this might be the applicant with typing and shorthand credits from high school. Elective courses will be chosen by the student to equal the number of credit hours omitted.

## **EXPENSES**

### **(For one and two-year programs)**

#### **Registration Fee**

A registration fee of \$2.00 is required of all students at the beginning of each school year.

#### **Tuition**

Full-time students will pay tuition of \$30.00 per quarter. This will be due on the registration date for each quarter. Part-time students will pay tuition fees of \$2.00 for each credit hour of work taken. Students whose legal residence is outside of the State of North Carolina will pay registration and tuition fees two-and-a-half times the above rates.

#### **Books and Supplies**

A student is required to buy the necessary textbooks and supplies prescribed in the curriculum area he is entering. These vary widely according to curriculum.

#### **Other Fees**

All students are urged to carry the group insurance available at the Institute for \$2.50 per year.

Students in the Cosmetology and Licensed Practical Nurse curriculums may be required to purchase their uniforms.

An activity fee of \$3.00 per quarter will be charged all students registered for curriculum programs.

Students may purchase year books if they desire.

A nominal fee is charged for a cap and gown at graduation.

#### **Refunds**

Refunds for full-time students are made only when a student withdraws from the Technical Institute for unavoidable reasons. In such cases,

\$20.00 may be refunded if withdrawal is completed within 20 calendar days from the beginning of the quarter. No refunds can be made after this time.

## ACADEMIC STANDING

### Grading System

Official grades are issued for each student at the end of each quarter. Students who lack passing averages at mid-quarter will be notified of this fact and should schedule a conference with the instructor and/or Director of Student Personnel.

Students enrolled in curriculum program courses will be graded by the letter-grade system shown below, and assigned a grade point equivalent in quality points for each quarter scheduled.

Numerical Grade	Grade	Grade Point Equivalent
93-100	A — Excellent	4 quality points each quarter hour
85- 92	B — Good	3 quality points each quarter hour
77- 84	C — Average	2 quality points each quarter hour
70- 76	D — Below Average	1 quality points each quarter hour
Below 70	F — Unsatisfactory	0 quality points each quarter hour
Inc.—Indicates failure to complete certain course requirements because of extenuating circumstances. All incompletes must be removed before the end of the succeeding term or the grade becomes an automatic “F”.		
WP—Student dropped the course, but had a passing grade average at the point of withdrawal.		
WF—Student dropped the course, and had a failing grade average at the point of withdrawal.		

### Withdrawals

Students who withdraw from the Institute during any quarter must first consult with the Director of Student Personnel, and then apply in writing for permission to withdraw. This protects the student's scholastic record, his right to re-enroll, and his right to transfer to another Technical Institute.

All school property assigned to the student must be accounted for at the time of withdrawal.

### Schedule Changes

Change of schedule after registration has been completed will be made only with permission of the Director of Student Personnel.

## **Academic Probation**

Students failing to maintain a 2.0 overall grade point equivalent average will be considered on academic probation, and may be required to modify his regular course load. A student may be asked to withdraw from a regular curriculum program if his grade point average drops below 1.0.

## **Requirements for Graduation**

A student is eligible for graduation when he has fulfilled the following requirements:

1. He has satisfactorily completed all the requirements of the curriculum in which he is enrolled.
2. He has sufficient quality points for an overall average of 2.0.
3. He has taken care of all financial obligations to the Caldwell Technical Institute.

## **Honors**

A graduating student who has earned an overall quality point average of 3.0 or better during his work at the Caldwell Technical Institute will receive his diploma or degree "With Honors".

# **STUDENT PERSONNEL ACTIVITIES AND SERVICES**

## **Counseling**

Opportunity for counseling services is made available to every student enrolled in the Caldwell Technical Institute. Counseling services are available for the discussion of personal problems affecting the satisfactory progress of the student in his chosen curriculum, for the discussion of his educational progress and for the discussion of work or study habits.

Each student is also assigned a faculty advisor to whom he may go for help.

# **FINANCIAL AID PROGRAM**

## **Scholarships**

A limited number of scholarships are available at present; however, more scholarships are expected in the near future. Students desiring such aid should make this known when filing an admission application. After initial payment and upon evidence of satisfactory performance by the recipient, the scholarship is payable in amounts prorated to each quarter of the school year. Scholarships available as of the printing of this publication are:

### **Claude F. Seila Scholarship**

Awarded each year to one student taking a full time curriculum. This scholarship, given by the Lenoir Woman's Club, will award \$175.00 to the recipient.

### **Anna Hasburg Mills Memorial Nursing Scholarship**

Awarded each year to one student taking the Practical Nursing curriculum. This is a full scholarship covering all tuition, fees, and textbooks in the program. This \$1,000.00 memorial scholarship fund was given by Mrs. Grace Mills Love.

### **Short Term Loans**

A revolving loan fund was established in 1966 by Caldwell Technical Institute for the benefit of students who, at the time of registration, do not have all the necessary money to pay tuition, fees, and purchase books and supplies. Students who indicate they lack sufficient funds and can assert that this is a temporary condition may borrow up to \$50.00. No interest is charged on these loans.

### **Long Term Loans**

North Carolina Funds for Vocational and Technical Students—The Caldwell Technical Institute is participating in the student loan program established by the State Board of Education making financial assistance available to those students enrolled full time in a vocational or technical education program. Qualified students may borrow up to \$300.00 in any year. Three and one-half per cent interest per year is charged on the unpaid balance beginning one year after the borrower ceases to pursue a full-time course of study at Caldwell Technical Institute. The total loan must be repaid in five years. Students may make application through the Director of Student Personnel.

Funds to support this loan program are limited, but the Institute is hopeful that additional monies will be contributed by other organizations for this worthwhile purpose.

**The National Student Loan Fund Act** makes provisions for students to borrow up to \$1,000 in any one year. Three per cent interest per year is charged on the unpaid balance beginning one year after the borrower ceases to pursue a course of study at an institution of higher learning. The total loan must be repaid in ten years. Students may make application through the financial aid counselor in the Student Personnel Office.

### **Part-Time Work Scholarships**

“Work-while-you-learn” jobs (work-study program) pay students a basic rate of \$1.25 an hour but can go up for highly specialized work. The average earnings per year is \$500.

All needy students are eligible, not just those from low-income (\$3,000 a year or less) families as was formerly the case. Students from the low-income families will still be given first preference to jobs, however.

Jobs are available now at Caldwell Technical Institute.

Students may work up to 15 hours a week while attending an institution full time, and during the summer they may work full time on a 40-hour week basis. Work may be either for the institute or for an approved off-campus non-profit agency.

**STUDENT INSURANCE.** A group accident insurance policy is available to students at a reasonable cost. A letter with full information is sent to all students prior to the opening of each session.

### **Placement Services**

A placement service will be provided for graduates of the Caldwell Technical Institute. Personal-data sheets on each student will be prepared for prospective employers. Interviews will be arranged as opportunities arise.

### **Student Housing**

No dormitory facilities are available at Caldwell Technical Institute; however, the Institute staff will assist in locating suitable housing for those requesting assistance.

### **Veterans**

Qualified veterans who are admitted for instruction may be approved upon presentation of the Certificate of Eligibility issued by the Veterans Administration. Students will be accepted under Public Law 550 or Public Law 89-358. Veterans under Public Law 550 and 89-358 are responsible directly to the school for payment of all costs.

### **Draft Deferment**

Draft Deferment forms are mailed to local Selective Service Boards upon request after registration.

### **Books and Supplies**

Students are responsible for securing their own textbooks and other supplies which may be required. Since these items may be used on the first day of classes, they should be purchased on the day of registration. The Institute bookstore is kept open extra hours during registration.

### **Library Facilities**

The library has a present collection of over 7,000 books and catalogued pamphlets and receives over 75 periodicals. New titles are being added

continually. The open-shelf system is used; students are encouraged to browse and use the reading room as a quiet place to study.

### **Studio, Laboratory, and Shop Equipment**

Ample opportunity for students to make practical application of their classroom work is an inherent part of many programs offered at the Institute. Within the framework of regulations, which are always necessary when expensive equipment is involved, students have some of the best equipment available for their use.

### **Attendance Policy**

This school has no system for allowing absences from classes. Absences are a serious deterrent to good scholarship; it is impossible to receive instruction, obtain knowledge, or gain skill when absent. As all students are adults with many responsibilities, an occasional absence from class might be absolutely necessary; however, such absences in no way lessen the student's responsibility for meeting the requirements of the class. There is always, however, a direct relationship between the number of class absences and the final grade. It is the student's responsibility to contact the instructor for any missed assignments. Explanation for an absence will not be demanded, but as a matter of courtesy the reason for it should be given to the instructor.

### **Student Conduct**

Institute students are considered to be mature individuals. Their conduct, both in and out of school, is expected to be that of any respectable adult in a public place. Under these circumstances, it is expected that the students will at all times consider they are living in a democratic situation, and that the reputation of the institution rests on their shoulders. Common courtesy and cooperation make the above suffice for a long list of rules and penalties.

### **Fundamentals Learning Laboratory**

The purposes of the Fundamental Learning Laboratory are threefold: to provide necessary materials and facilities to help adults prepare for the high school equivalency examination, to help students and adults gain educational improvement of their own choosing, and to help students remedy academic deficiencies.

A registration fee of \$2.00 is paid by the applicant upon registering. The only necessary materials he need furnish are pencil and paper, and the only requirement is that he be at least eighteen years old.

The lab schedule will be announced at the beginning of the school term.

**ASSOCIATE IN  
APPLIED SCIENCE  
DEGREE  
PROGRAMS**

## **TECHNICAL CURRICULA**

The two-year technical curricular program is designed to prepare enrollees for technician-level occupations. More emphasis is given to theory than in vocational courses. Also, roughly one-half of the course requirements are in general education and the sciences underlying the particular occupational area.

### **ADMISSION REQUIREMENTS TECHNICAL PROGRAM**

#### **MINIMUM ADMISSION REQUIREMENTS**

Requirements for admission of a candidate to the regular two-year technology program include the following qualifications. The candidate:

1. Must be a high school graduate or have a State approved equivalent education.
2. Must have high school credit for two units of mathematics, one of which is in algebra and the other in plane geometry or an equivalent in modern mathematics. Competence may be determined by appropriate tests. Those who fail to meet the accepted standards for technical mathematics will be required to complete successfully a pre-requisite mathematics course to remove the deficiency. A student with deficiencies may be admitted only when there is strong indication of probable success.
3. Should have completed one unit of physical science with laboratory.
4. Must submit the transcripts of high school and post-high school education.
5. Must demonstrate aptitude for technician training as determined by standards tests. These tests will aid in student selection, placement, and guidance. Institution guidance and counseling will be available to the student throughout his education, not just at the time of his enrollment.
6. Must be in acceptable condition of physical and mental health. Medical examination may be required at the discretion of the administration.
7. Must have an interview with a designated representative for discussing enrollment plans and lifetime career goals.

### **CONTACT HOURS AND CREDIT HOURS**

These curriculums are to be offered on the basis of an average load

of twenty-five contact hours per five-day week, eleven weeks per quarter for six quarters. Students enrolled in a part-time program will be scheduled, based on class needs, to accomplish this average load, but over a longer period of time.

Quarterly credit hours are awarded to students on the following arrangement:

Credit of one quarter hour for each hour of class work per week for eleven weeks. The average hour of class will require two hours of assigned homework for the average student.

Credit of one quarter hour for each two hours of laboratory work per week for eleven weeks. One hour of assigned homework will accompany an average laboratory period of two hours.

Credit of one quarter hour for each three hours of manipulative laboratory for eleven weeks. No outside work will ordinarily be assigned to accompany this shop period. Manipulative laboratories will be indicated by an asterisk.

The following definitions will explain the foregoing terms:

“Class work” is lecture and other classroom instruction.

“Laboratory” involves demonstration by instructor, experimentation and practice by students.

“Manipulative laboratory” involves development of manual skills and job proficiency.

## **ADMISSION REQUIREMENTS BUSINESS TECHNOLOGY PROGRAMS**

### **MINIMUM ADMISSION REQUIREMENTS**

Requirements for admission of a candidate to the regular two-year Associate of Applied Science Degree program include the following qualifications. The candidate:

1. Must be a high school graduate or have a State approved equivalent education.
2. Must submit the transcript of high school and post-high school education.
3. Must demonstrate aptitude for business training as determined by standardized tests. These tests will aid in student selection, placement, and guidance. Institution guidance and counseling will be available to the student throughout his education, not just at the time of his enrollment.
4. Must be in acceptable condition of physical and mental health. Medi-

cal examination may be required at the discretion of the administration.

5. Must have an interview with a designated representative for discussing enrollment plans and lifetime career goals.

## **ELECTIVES**

These programs have provisions for electives. Students with skills in typing and shorthand may be exempted from taking T-BUS 102 Typewriting, T-BUS 103 Typewriting, and T-BUS 106 Shorthand. In this case the student is to elect a course of equivalent or more hours from any business education curriculum of the associate degree level.

# **BUSINESS ADMINISTRATION**

## **INTRODUCTION**

### **Purpose of Curriculum**

In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.
3. Knowledge in specific elements of accounting, finance, and business law.
4. Understanding and skill in effective communication for business.
5. Knowledge of human relations as they apply to successful business operations in a rapidly expanding economy.

### **Job Description**

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk

to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation; and communications.

# BUSINESS ADMINISTRATION

## SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter
			Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>					
T-ENG	101	Grammar	3	0	3
T-BUS	102	Typewriting (or Elective)	2	3*	3
T-MAT	110	Business Mathematics	5	0	5
T-BUS	101	Introduction to Business	5	0	5
T-ECO	102	Economics	3	0	3
			<hr/>	<hr/>	<hr/>
			18	3	19
<b>SECOND QUARTER</b>					
T-ENG	102	Composition	3	0	3
T-BUS	120	Accounting	5	2	6
T-ECO	104	Economics	3	0	3
T-BUS	115	Business Law	3	0	3
T-BUS	123	Business Finance	3	0	3
			<hr/>	<hr/>	<hr/>
			17	2	18
<b>THIRD QUARTER</b>					
T-ENG	103	Report Writing	3	0	3
T-BUS	124	Business Finance	3	0	3
T-BUS	110	Office Machines	2	2	3
T-BUS	121	Accounting	5	2	6
T-BUS	116	Business	3	0	3
			<hr/>	<hr/>	<hr/>
			16	4	18

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\*"Manipulative laboratory" involves development of skills and job proficiency.  
Credit of one quarter hour for each three hours of laboratory.

Course Title			Hours Per Week	Quarter
			Class	Hours Credit
FOURTH QUARTER				
T-ENG	204	Oral Communication	3	0 3
T-BUS	232	Sales Development	3	0 3
T-EDP	104	Introduction to Data		
		Processing System	3	2 4
T-BUS	239	Marketing	5	0 5
		Elective	3	0 3
			17	2 18
FIFTH QUARTER				
T-ENG	206	Business Communication	3	0 3
		Social Science Elective	3	0 3
T-BUS	243	Advertising	3	2 4
T-BUS	235	Business Management	3	0 3
		Elective	3	0 3
			15	2 16
SIXTH QUARTER				
		Social Science Elective	3	0 3
T-BUS	229	Taxes	3	2 4
T-BUS	272	Principles of Supervision	3	0 3
T-BUS	271	Office Management	3	0 3
		Elective	6	0 6
			18	2 19
Total Quarter Hours in Courses				96
Electives (Min.)				12
				108

# EXECUTIVE SECRETARY

## INTRODUCTION

### **Purpose of Curriculum**

The demand for better qualified secretaries in our ever-expanding business world is becoming more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business world, and to enable persons to become proficient soon after accepting employment in the business office.

The Executive Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the business world. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development.

### **Job Description**

The graduate of the Executive Secretary Curriculum should have a knowledge of business terminology, skill in dictation, and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses such as insurance companies, banks, marketing institutions, and financial firms.

## SECRETARY - EXECUTIVE

### SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter
			Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>					
T-ENG	101	Grammar	3	0	3
T-BUS	102	Typewriting (Or Elective)	2	3*	3
T-MAT	110	Business Mathematics	5	0	5
T-BUS	101	Introduction to Business	5	0	5
T-BUS	106	Shorthand (Or Elective)	3	2	4
			18	5	20
<b>SECOND QUARTER</b>					
T-ENG	102	Composition	3	0	3
T-BUS	103	Typewriting (Or Elective)	2	3*	3
T-BUS	107	Shorthand	3	2	4
T-BUS	120	Accounting	5	2	6
T-BUS	115	Business Law	3	0	3
			16	7	19
<b>THIRD QUARTER</b>					
T-ENG	103	Report Writing	3	0	3
T-BUS	104	Typewriting	2	3*	3
T-BUS	108	Shorthand	3	2	4
T-BUS	110	Office Machines	2	2	3
T-BUS	112	Filing	3	0	3
			13	7	16

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\*"Manipulative laboratory" involves development of skills and job proficiency.  
Credit of one quarter hour for each three hours of laboratory.

Course Title			Hours Per Week		Quarter
			Class	Lab.	Hours Credit
<b>FOURTH QUARTER</b>					
T-ENG	204	Oral Communication	3	0	3
T-BUS	206E	Dictation and Transcription (Executive)	3	2	4
T-BUS	205	Advanced Typewriting	2	3*	3
T-BUS	211	Office Machines	2	2	3
T-EDP	104	Introduction to Data Processing Systems	3	2	4
			<hr/>	<hr/>	<hr/>
			13	9	17
<b>FIFTH QUARTER</b>					
T-ENG	206	Business Communication	3	0	3
T-BUS	207E	Dictation and Transcription (Executive)	3	2	4
T-BUS	214	Secretarial Procedures	3	2	4
		General Drafting Elective	3	0	3
		Elective	6	0	6
			<hr/>	<hr/>	<hr/>
			18	4	20
<b>SIXTH QUARTER</b>					
		Social Science Elective	3	0	3
T-BUS	208E	Dictation and Transcription (Executive)	3	2	4
T-BUS	271	Office Management	3	0	3
		Elective	6	0	6
			<hr/>	<hr/>	<hr/>
			15	2	16
Total Quarter Hours in Courses					96
Electives (Min.)					12
					<hr/>
					108

# **MEDICAL SECRETARY**

## **INTRODUCTION**

### **Purpose of Curriculum**

The demand for better-qualified medical secretaries in our ever-expanding medical profession is becoming more acute. The purpose of this curriculum is to outline a training program that will provide specialized training in the accepted procedures required by the medical profession, and to enable persons to become proficient soon after accepting employment in the medical and health occupations.

The Medical Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the medical profession. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development. During the last quarter, the student engages in six hours of office application each week in a hospital or physician's office.

### **Job Description**

The graduate of the Medical Secretary Curriculum should have a knowledge of medical terminology, skill in dictation, and accurate transcription of medical records, reports, and letters. The duties of a medical secretary may consist of: taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing, and scheduling appointments. The graduate may enter a secretarial position in a variety of offices such as physicians', private and public hospitals, Federal and State health programs, and the drug and pharmaceutical industry.

## SECRETARIAL - MEDICAL

### SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Hours Credit
FIRST QUARTER			Class	Lab.	
T-ENG	101	Grammar	3	0	3
T-BUS	102	Typewriting (Or Elective)	2	3*	3
T-MAT	110	Business Mathematics	5	0	5
T-BUS	101	Introduction to Business	5	0	5
T-BUS	106	Shorthand (Or Elective)	3	2	4
			18	5	20

### SECOND QUARTER

T-ENG	102	Composition	3	0	3
T-BUS	103	Typewriting (Or Elective)	2	3*	3
T-BUS	107	Shorthand	3	2	4
T-BUS	120	Accounting	5	2	6
T-BUS	115	Business Law	3	0	3
			16	7	19

### THIRD QUARTER

T-ENG	103	Report Writing	3	0	3
T-BUS	104	Typewriting	2	3*	3
T-BUS	108	Shorthand	3	2	4
T-BUS	110	Office Machines	2	2	3
T-BUS	112	Filing	3	0	3
T-BUS	183W	Terminology and Vocabulary (Medical)	3	0	3
			16	7	19

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\*“Manipulative laboratory” involves development of skills and job proficiency.  
Credit of one quarter hour for each three hours of laboratory.

Course Title			Hours Per Week		Quarter Hours Credit
FOURTH QUARTER			Class	Lab.	
T-ENG	204	Oral Communication	3	0	3
T-BUS	206M	Dictation and Transcription (Medical)	3	2	4
T-BUS	205	Advanced Typewriting	2	3*	3
T-BUS	211	Office Machines	2	2	3
T-EDP	104	Introduction to Data Processing Systems	3	2	4
T-BUS	284M	Terminology and Vocabulary (Medical)	3	0	3
			16	9	20
FIFTH QUARTER					
T-ENG	206	Business Communication	3	0	3
T-BUS	207M	Dictation and Transcription (Medical)	3	2	4
T-BUS	214	Secretarial Procedures	3	2	4
		General Drafting Elective	3	0	3
		Elective	3	0	3
			15	4	17
SIXTH QUARTER					
		Social Science Elective	3	0	3
T-BUS	208M	Dictation and Transcription (Medical)	3	2	4
T-BUS	271	Office Management	3	0	3
		Elective	3	0	3
			12	2	13

# **DRAFTING AND DESIGN—Furniture**

## **INTRODUCTION**

### **Purpose of Curriculum**

This curriculum guide was prepared for the purpose of outlining a training program for students of drafting and design technology. There are certain identifiable duties which are common to all technicians of this general classification and which comprise the basic areas of technical knowledge they need. This curriculum has been designed for training persons in the accepted performance of these basic duties that will be assigned, and to enable the individual student to become proficient in a short time after he becomes employed in the industry.

Courses in general education have been included to give a student the assurance that comes with education upon a broad base. The technician associates with many levels of thought and expression—administrative personnel, scientists, engineers, skilled workmen—and must be able to communicate effectively with all levels. Courses in the skills of communication, human relations, economics, and the field of industrial organization and management have been provided to assist the student to develop understanding and confidence. Courses containing essential information from related subject areas, such as mathematics, physics, and mechanics, have been included in order to provide the student a better academic base for his training.

### **Job Description**

Furniture drafting and design technicians are concerned with the preparation of drawings for design proposals, for experimental models, and items for production use.

These technicians perform many aspects of design in a specialized field, such as the developing of the design of a section, sub-assembly, or major component. Investigating design factors and availability of material and equipment, production methods and facilities are frequent assignments. They also design units and controls from specifications by utilizing drawings of existing units and reports on functional performance or design components in industrial fields based on engineers' original design concepts or specific ideas. They are assigned as coordinators for the execution of related work of other design, production, tooling, material and planning groups. Technicians in this classification will often supervise the preparation of working drawings.

# DRAFTING AND DESIGN—Furniture

## SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter
			Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>					
T-ENG	101	Grammar	3	0	3
T-MAT	101	Technical Mathematics	5	0	5
T-PHY	101	Physics: Properties of Matter	3	2	4
T-DFT	101	Technical Drafting	0	6*	2
T-CAB	101				
		Furniture Processes	3	3	4
			<hr/>	<hr/>	<hr/>
			14	11	18
<b>SECOND QUARTER</b>					
T-ENG	102	Composition	3	0	3
T-MAT	102	Technical Mathematics	5	0	5
T-PHY	102	Physics: Work, Energy, Power	3	2	4
T-DFT	102	Technical Drafting	0	6*	2
T-UPH	102	Furniture Processes	3	3	4
			<hr/>	<hr/>	<hr/>
			14	11	18
<b>THIRD QUARTER</b>					
T-ENG	103	Report Writing	3	0	3
T-ISC	215	Product Development	3	0	3
T-DFT	105	Furniture Drafting	2	6*	4
T-DES	117	Visual Design	2	6*	4
T-DES	225	Furniture Styling	2	3	3
			<hr/>	<hr/>	<hr/>
			12	15	17

Course Title			Hours Per Week		Quarter
			Class	Lab.	Hours Credit
FOURTH QUARTER					
T-ENG	204	Oral Communication	3	0	3
T-DFT	204	Descriptive Geometry	2	4	4
T-DFT	240	Furniture Drafting	2	6*	4
T-DES	118	Visual Design	3	3	4
T-DES	239	Rendering	2	3	3
			12	16	18

FIFTH QUARTER

		Social Science Elective	3	0	3
T-DFT	241	Furniture Design Drafting	2	6*	4
T-DES	216	Tectonic Design	3	3*	4
T-DES	245	Anatomical Relationship	5	0	5
		Elective			3
					19

SIXTH QUARTER

		Social Science Elective	3	0	3
T-DFT	242	Furniture Design Drafting	2	6*	4
T-DES	250	Interior Planning and Display	3	3	4
		Elective			7
					18

\*“Manipulative laboratory” involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

# LIBRARY ASSISTANT

## INTRODUCTION

A Library Assistant is a person working **under a professional librarian** at the sub-professional level who is trained to do many of the non-professional tasks which must be handled by the librarian without such assistance.

A Library Assistant receives task assignments from, and is directly responsible to, the professional librarian. These task assignments may include one or more of the following:

### Job Description

1. Compiles records, sorts and shelves books, and issues and receives library materials such as books, phonograph records. 2. Records identifying data and date due on cards by hand or by photographic equipment to issue books to patrons. 3. Inspects returned books for damage, verifies due date, and computes and receives overdue fines. 4. Reviews records to compile list of overdue books and issues overdue notices to borrowers. 5. Sorts books, publications, and other items according to classification code and returns them to shelves, files, or other designated storage area. 6. Locates books and publications for patrons. 7. Issues borrower's identification card according to established procedures. 8. Files cards in catalog drawers according to system. 9. Repairs books, using mending tape and paste and brush. 10. Answers inquiries of non-professional nature on telephone and in person and refers persons requiring professional assistance to the librarian. 11. Types cards, lists, and duty schedules.

There is a very critical shortage of professionally-trained librarians at the present time, and the outlook for the near future indicates that this shortage will become even more critical. Many librarians, even during this critical shortage, spend considerable amounts of their time on non-professional tasks.

The 1965 Elementary and Secondary School Act makes available considerable sums of money for library improvements in the public schools, the effectiveness of which depends upon professional guidance and direction from a trained librarian. Colleges, other post-high school institutions, hospitals, local governmental units, churches, industries, and other organizations are constantly expanding present libraries or creating new ones.

This program is designed to train persons to do more of the non-professional tasks and increase the effectiveness of the professionally-trained librarian.

### **Purpose of the Program**

A two-year program designed to prepare library assistants for technical work in libraries — public school, hospital, government, and industry. Graduates are qualified for general library duties, including ordering and accessioning books, processing materials, cataloging, binding related pamphlets and periodicals, mending torn materials, and keeping the vertical file up-to-date.

1. To provide a background of general education, coupled with certain basic library skills to prepare interested students to enter library work above the minimum clerk status.
2. To introduce the varieties of library work into which a trained person may work, suiting abilities to the particular job.
3. To provide training in skills at an undergraduate level, making possible entry into library work, without involving the long “in service” training now needed for clerks.
4. To provide extended training in library techniques for the person who already has either the AA or the BA, who would be eligible for supervisory sub-professional work with this specialized training.

The suggested curriculum is presently being outlined by the Curriculum Laboratory, Department of Community Colleges, and will appear in a catalog supplement at a later date.

## **DIPLOMA PROGRAMS**

## **VOCATIONAL CURRICULA**

One year diploma programs designed to prepare enrollees for trade level occupations. Much emphasis is given to the development of manipulative skills.

## **ADMISSION REQUIREMENTS TRADE PROGRAM**

The following are minimum admission requirements to the regular one-year trade preparatory curriculums and vocational programs:

### **MINIMUM ADMISSION REQUIREMENTS**

A candidate for admission to the regular trade-vocational training program must meet the following qualifications:

1. Must be at least 18 years of age and have the ability to enter into or make advancement in the area in which enrolled.
2. Must have satisfactory completed a minimum of eight (8) units of accredited secondary school work. Those who have not successfully completed eight (8) units of such work will be required to take other standard and/or local institution tests.
3. Must demonstrate aptitude for trade-vocational training as determined by standard and/or local institution tests to insure ability to meet job requirements in the desired trade.
4. Must have one (1) unit of secondary school algebra or an equivalent in modern mathematics. Those who have deficiencies will be required to remove the deficiency before completing their training.

Provisional admittance may be granted at the discretion of the administration.

5. Must have a personal interview with designated school representative.
6. Must be in acceptable condition of physical and mental health to meet qualifications for a given occupation.

## CONTACT HOURS AND CREDIT HOURS

These curriculums are to be offered on the basis of an average load of twenty-five contact hours per five-day week, eleven weeks per quarter, for four quarters. Students enrolled in a part-time program will be scheduled, based on class needs, to accomplish this average load, but over a longer period of time.

Quarterly credit hours are awarded to students on the following arrangement:

Credit of one quarter hour for each hour of class work per week for eleven weeks. The average hour of class will require two hours of assigned homework, for an average student.

Credit of one quarter hour for each two hours of laboratory work per week for eleven weeks. One hour of assigned homework will accompany an average period of two hours.

Credit of one quarter hour for each three hours of shop practice for eleven weeks. No outside work will ordinarily be assigned to accompany this shop period.

The following definitions will explain the foregoing terms:

“Class work” is lecture and other classroom instruction.

“Laboratory” involves demonstration by instructor, experimentation and practice by students.

“Shop practice” involves development of manual skills and job proficiency.

# **AUTOMOTIVE MECHANICS**

## **INTRODUCTION**

### **Purpose of Curriculum**

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, and shop practice.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks, buses, and a variety of gasoline-powered equipment. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

### **Job Description**

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and buses. In some communities and rural areas, they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

AUTOMOTIVE

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter
			Class	Lab.	Hours Credit
FIRST QUARTER					
PME	1101	Internal Combustion Engine	3	12	7
MAT	1101	Fundamentals of Mathematics	5	0	5
ENG	1101	Reading Improvement	2	0	2
PHY	1101	Applied Science	3	2	4
			13	14	18
SECOND QUARTER					
PME	1102	Engine Electrical and Fuel Systems	5	12	9
ENG	1102	Communication Skills	3	0	3
DFT	1101	Schematics and Diagrams: Power Mechanics	0	3	1
PHY	1102	Applied Science	3	2	4
			11	17	17
THIRD QUARTER					
AUT	1123	Automotive Chassis and Suspensions Systems	3	9	6
AUT	1121	Braking Systems	3	3	4
PSY	1101	Human Relations	3	0	3
AHR	1101	Automotive Air Conditioning	2	3	3
WLD	1101	Basic Gas Welding	0	3	1
			11	18	17
FOURTH QUARTER					
AUT	1124	Automotive Power Train Systems	3	9	6
AUT	1125	Automotive Servicing	3	9	6
BUS	1103	Small Business Operations	3	0	3
			9	18	15

# **COSMETOLOGY**

## **INTRODUCTION**

### **Purpose of Curriculum**

This course outline is planned to meet the requirements of the North Carolina Board of Cosmetics Arts.

The first quarter of instruction consists of an introduction to Cosmetology including the fundamentals of ethics, history, theory, and practice. The class activities include practical lessons, lectures, demonstrations, student practice on wefts and mannequins.

The second quarter of instruction places more emphasis on manipulative skills. The acquisition of correct habits and skills is stressed. Practical work is done almost exclusively on patrons and models.

Third quarter correlates theory with practice in the study of related subjects and developing more advanced artistic skills.

In the fourth quarter the students are capable of doing work unassisted and are equipped for the state examination and outside employment. Each student, prior to filing an application to the Cosmetic Arts Board for examination, is given a test both theoretical and practical.

Cosmetologists may provide a variety of services for patrons or they may specialize in certain jobs.

### **Job Description**

They cut hair according to patron's instructions or according to original style (barber); Comb and wave patron's hair (hairdresser), occasionally suggesting or creating new and varied coiffures to meet individual needs (hair stylist). Tint or bleach hair (hair colorist). Give hair and scalp treatments in accordance with standardized methods (scalp-treatment operators). Apply various lotions, creams, and packs to patron's face to clean or treat skin, remove wrinkles, and apply cosmetics (facial operator). Clean, shape, and polish patron's nails (manicurist).

# COSMETOLOGY

## SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Contact
			Class	Lab.	Hours
<b>FIRST QUARTER</b>					
COS	1101	Introduction to Cosmetology	5	1	66
COS	1102	Bacteriology, Sanitation, and First Aid	5	2	77
COS	1103	Shampoo and Rinse	0	2	22
COS	1105	Finger Waving and Pin Curling	1	9	110
COS	1107	Manicuring	1	2	33
COS	1112	Personality	2	0	22
			<hr/>	<hr/>	<hr/>
			14	16	330
<b>SECOND QUARTER</b>					
COS	1111	Hair Styling and Wig Care	2	9	121
COS	1115	Tinting and Bleaching	1	8	99
COS	1106	Hair Shaping	1	9	110
ENG	1102	Communication Skills	2	0	22
			<hr/>	<hr/>	<hr/>
			6	26	352
<b>THIRD QUARTER</b>					
COS	1110	Permanent Waving — Cold and Heat Wave	2	15	187
COS	1118	Anatomy I	3	2	55
COS	1120	Facials	1	5	66
PSY	1101	Human Relations	2	0	22
			<hr/>	<hr/>	<hr/>
			8	22	330
<b>FOURTH QUARTER</b>					
COS	1116	Scalp Treatments	1	2	33
COS	1119	Anatomy II	2	4	66
COS	1121	Disorders of Skin, Nails, & Hair	5	3	88
COS	1122	Electricity	3	1	44
COS	1123	Chemistry	2	1	33
COS	1124	Operational Management	1	0	11
		(Elective)	3	0	33
			<hr/>	<hr/>	<hr/>
			17	11	308

# DRAFTING - MECHANICAL

## INTRODUCTION

### Purpose of Curriculum

This curriculum is designed to prepare students to enter the field of mechanical drafting. The first two quarters contain courses basic to all fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter mechanical drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel—administrative, architects, engineers, skilled workmen—and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics and industrial organization are provided to assist the student in developing understanding and confidence in his relations with other persons.

### Job Description

**A draftsman** prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions: makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of triangle, T-square, and other drafting tools. Lays tracing paper on drawing and traces drawing in pencil or ink. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

**A mechanical draftsman** performs the general duties of a draftsman and also specializes in making rough drafting sketches of proposed mechanical devices, and the drawing of necessary details. Prepares accurate scale drawings of parts or machines from specifications.

# DRAFTING - MECHANICAL

## SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Hours Credit
FIRST QUARTER			Class	Lab.	
DFT	1121	Drafting	3	12	7
MAT	1103	Geometry	3	0	3
ENG	1101	Reading Improvement	2	0	2
PHY	1101	Applied Science	3	2	4
			<hr/>	<hr/>	<hr/>
			11	14	16

## SECOND QUARTER

DFT	1122	Drafting	3	6	5
DFT	1125	Descriptive Geometry	2	3	3
MAT	1102	Algebra	5	0	5
ENG	1102	Communication Skills	3	0	3
PHY	1102	Applied Science	3	2	4
			<hr/>	<hr/>	<hr/>
			16	11	20

## THIRD QUARTER

DFT	1131	Mechanical Drafting	3	12	7
MAT	1104	Trigonometry	3	0	3
PSY	1101	Human Relations	3	0	3
MEC	1113	Shop Processes	2	3	3
MEC	1115	Treatment of Ferrous Metals	2	3	3
			<hr/>	<hr/>	<hr/>
			13	18	19

## FOURTH QUARTER

DFT	1132	Mechanical Drafting	3	12	7
MEC	1114	Shop Processes	2	3	3
MEC	1116	Treatment of Non-Ferrous Metals	2	3	3
BUS	1105	Industrial Organizations	3	0	3
			<hr/>	<hr/>	<hr/>
			10	18	16

# DRAFTING - FURNITURE

## INTRODUCTION

### Purpose of Curriculum

This curriculum is designed to prepare students to enter the field of furniture drafting. The first two quarters contain courses basic to all fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter furniture drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel—administrative, architects, engineers, skilled workmen—and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics and industrial organization are provided to assist the student in developing understandings and confidence in his relations with other persons.

### Job Description

**A draftsman** prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions: makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of triangle, T-square, and other drafting tools. Lays tracing paper on drawing and traces drawing in pencil or ink. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

**A furniture draftsman** performs the general duties of a draftsman and also specializes in making rough drafting sketches of proposed furniture pieces and then draws necessary details from the sketch. Prepares

accurate scale drawings of furniture parts or groups to reduced or full scale. Prepares specifications and bills of materials for manufacture of part.

**A furniture reproducer draftsman** makes working drawings and templates of antique or specially ordered furniture, for reproduction purposes: draws sketch of piece showing all views, freehand or with drawing instruments. Measures piece with rule and calipers, and notes dimensions of drawing. Makes detailed drawing of joints, carvings, and sections for shop use. Traces or draws outlines of parts on plywood or cardboard and cuts out part along outline to make template. Marks identification on templates indicating name of part, types of construction, kinds of wood, and finishes, in code or words. May make drawings from pictures when models are not available.

## DRAFTING - FURNITURE

### SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Hours Credit
FIRST QUARTER			Class	Lab.	
DFT	1121	Drafting	3	12	7
MAT	1103	Geometry	3	0	3
ENG	1101	Reading Improvement	2	0	2
PHY	1101	Applied Science	3	2	4
			<hr/>	<hr/>	<hr/>
			11	14	16

### SECOND QUARTER

DFT	1122	Drafting	3	6	5
DFT	1125	Descriptive Geometry	2	3	3
MAT	1102	Algebra	5	0	5
ENG	1102	Communication Skills	3	0	3
PHY	1102	Applied Science	3	2	4
			<hr/>	<hr/>	<hr/>
			16	11	20

### THIRD QUARTER

DFT	1135	Furniture Drafting	3	12	7
MAT	1104	Trigonometry	3	0	3
PSY	1101	Human Relations	3	0	3
UPH	1111	Upholstery Materials and Methods	2	0	2
CAB	1110	Case Goods Materials and Methods	2	3	3
			<hr/>	<hr/>	<hr/>
			13	15	18

### FOURTH QUARTER

DFT	1136	Furniture Drafting	3	15	8
DFT	1137	Furniture Specifications	3	0	3
DFT	1138	Furniture Styling and Decoration	3	0	3
BUS	1105	Industrial Organizations	3	0	3
			<hr/>	<hr/>	<hr/>
			12	15	17

## **Production Assistant (Furniture Option)**

The Production Assistant accepts task assignments from and is directly responsible to the plant superintendent. He is directly concerned with maintenance of production flow of high quality articles. He assists the superintendent in coordinating all manufacturing activities leading to the proper quantity and quality of production. He is also concerned with cost analysis and with more efficient production methods.

In this position he must have a good understanding of the total manufacturing process including raw materials needed, production scheduling, billing and routing, construction methods, cost analysis and quality control.

Personal characteristics needed by the Production Assistant include intelligence, ambition, initiative, ability to work well with different types of people, mechanical aptitude, numerical ability, and ability to analyze problem situations and suggest possible solutions.

# **Suggested Curriculum** **for** **Production Assistant** **(Furniture Option)**

FIRST QUARTER			Course Per Week Class	Hours Lab.	Quarter Hours Credit
FURN	1101	Cost Records & Cost Estimates	2	0	2
FURN	1102	Production Control	1	4	3
FURN	1103	Construction and Billing	2	6	4
FURN	1104	Characteristics of Woods	1	0	1
FURN	1105	Glues	1	0	1
FURN	1106	Furniture Sanding	1	3	2
FURN	1107	Wood Finishes	3	3	4
FURN	1108	Furniture Manufacturing and Processing Equipment I *	1*	4*	3
DD	1307	General Drafting *	2*	3*	3
(31 or 32 hr. week)			12 or	19 or	23
			13	20	
SECOND QUARTER					
SOC	1101	Human Relations	3	0	3
FURN	1109	Furniture Manufacturing and Processing Equipment II	1	4	3
FURN	1110	Method Standard Data	2	2	3
FURN	1111	Collecting and Reporting Information	2	2	3
FURN	1112	Routing and Process Sequences	1	3	2
FURN	1113	Quality Control	3	0	3
FURN	1114	Supervisory Responsibilities	3	0	3
(32 hr. week)			15	17	20

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\*FURN 108 and DD 307 are options within the curriculum. Students will select one of these courses.

# **ELECTRICAL INSTALLATION AND MAINTENANCE**

## **INTRODUCTION**

### **Purpose of Curriculum**

The rapid expansion of the national economy and the increasing development of new electrical products is providing a growing need for qualified people to install and maintain electrical equipment. By mid-1960 more than 350,000 were employed as either construction electricians or maintenance electricians. Between 5,000 and 10,000 additional tradesmen are required each year to replace those leaving the industry. It is expected that the total requirements for electrical tradesmen will reach 500,000 by 1966 and 700,000 by 1970. The majority of the electrical tradesmen today are trained through apprenticeship of on-the-job training programs.

This curriculum guide will provide a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large portion of the program is devoted to laboratory and shop instruction which is designed to give the student practical knowledge and application experience in the fundamentals taught in class.

### **Job Description and Requirements**

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice, where he will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits. He will have a basic knowledge of motor and motor control systems; industrial electronic control systems; business procedures, organization, and practices; communicative skills; and the necessary background to be able to advance through experience and additional training through up-grading courses offered in the center.

# ELECTRICAL INSTALLATION AND MAINTENANCE

## SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Hours Credit
FIRST QUARTER			Class	Lab.	
ELC	1112	Direct and Alternating Current	5	12	9
ENG	1101	Reading Improvement	2	0	2
MAT	1115	Electrical Math	5	0	5
PHY	1101	Applied Science	3	2	4
			15	14	20

### SECOND QUARTER

ELC	1113	Alternating Current and Direct Current Machines and Controls	5	12	9
DFT	1110	Blueprint Reading: Building Trades	0	3	1
ENG	1102	Communication Skills	3	0	3
PHY	1102	Applied Science	3	2	4
			11	17	17

### THIRD QUARTER

ELC	1124	Residential Wiring	5	9	8
ELN	1118	Industrial Electronics	3	6	5
PSY	1101	Human Relations	3	0	3
DFT	1113	Blueprint Reading: Electrical	0	3	1
			11	18	17

### FOURTH QUARTER

ELC	1125	Commercial and Industrial Wiring	5	12	9
ELN	1119	Industrial Electronics	3	6	5
BUS	1103	Small Business Operations	3	0	3
			11	18	17

# GENERAL MAINTENANCE MECHANIC

## INTRODUCTION

### Purpose of Curriculum

Recent surveys by industrial and governmental agencies in North Carolina have shown a marked shortage of apprentices and other trainees in many trades. This shortage is notably true in the maintenance mechanic trade.

To meet the training needs of those planning to enter, or who have already entered this trade, this curriculum guide has been prepared. The variety of skilled operations and trade activities to which the student will be exposed should prove most valuable as he enters the trade.

The training processes outlined are not intended to replace the apprenticeship, but rather to provide industry with men ready to learn and with the background to become skilled maintenance mechanics. It is believed that this training should provide the enriched trade-training program needed in modern industry.

### Job Description

The graduate of the maintenance-mechanic trade program will be qualified to enter modern industry and participate in the overall plant maintenance as an on-the-job trainee, or apprentice, where he will assist in the maintenance of machinery, electrical systems, welding, carpentry, and many other areas in the overall industrial operation. The graduate will be qualified in the overall maintenance of residential, commercial, school, or industrial plants.

# GENERAL MAINTENANCE MECHANIC

## CURRICULUM

No definite curriculum has been established at the time of this publication, but instruction in the following areas will be covered in the curriculum:

- Electricity
- Electronic Installation
- Safety
- Blue Print Reading

Shop Math  
A. C. Circuits and Controls  
D. C. Power Control and Operation  
Welding  
Carpentry  
Lubrication  
Pneumatic Installation  
Mechanical Practices  
Operation of Machine Tools  
Hand Tools  
Machinery Operation  
Mechanical Operations

## **PRACTICAL NURSE EDUCATION**

### **INTRODUCTION**

#### **Purpose of Curriculum**

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand an increased number of well-trained personnel for health services. Realizing this need, the State Department of Community Colleges, in conjunction with local hospitals, administers programs of practical nurse education in local school systems, community colleges, technical institutes, and in industrial education centers throughout the state.

The aim of the Practical Nurse Education Program is to make available to qualified persons the opportunity to prepare for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Students are selected on the basis of demonstrated aptitude for nursing as determined by pre-entrance tests, interviews with faculty members, high school record, character references, and reports of medical and dental examinations.

Throughout the one-year program, the student is expected to grow continuously in acquisition of knowledge and understandings related to nursing, the biological sciences, the social sciences, and in skills related to nursing practice, communications, interpersonal relations, and use of good judgment. Evaluation of student performance consists of tests on all phases of course content, evaluation of clinical performance, and evaluation of adjustment to the responsibilities of nursing. A passing score is

required on all graded work, plus demonstrated progress in application of nursing skills to actual patient care.

### **Job Description**

Graduates of accredited programs of practical nurse education are eligible to take the licensing examination given by the North Carolina Board of Nursing. This examination is given twice each year, usually in April and September. A passing score entitles the individual to receive a license, and to use a legal title "Licensed Practical Nurse." The license must be renewed annually. The Licensed Practical Nurse can apply for licensure in other states on the basis of a satisfactory examination score, without repeating the examination.

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices, and, in some localities, public health facilities. In all situations, the LPN functions under supervision of a registered nurse and or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understandings of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

**PRACTICAL NURSING**  
**SUGGESTED CURRICULUM BY QUARTERS**

Course Title			Hours Per Week	Contact Hours Per Quarter	
FIRST QUARTER			Class*	Lab.*	
NUR	1001	Practical Nursing I	28	2	330
SECOND QUARTER					
NUR	1002	Practical Nursing II	12	24	396
THIRD QUARTER					
NUR	1003	Practical Nursing III	12	24	396
FOURTH QUARTER					
NUR	1004	Practical Nursing IV	12	24	396
TOTAL					1518

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\*Figures given are averages, as there will be some variation from week to week.

# CARPENTRY

## INTRODUCTION

### **Purpose of Curriculum**

Carpentry is one of the basic trades in the construction field. Carpenters construct, erect, install, and repair structures of wood, plywood, and wallboard, using hand and power tools. The work must conform to local building codes for both residential and commercial structures.

This curriculum in carpentry is designed to train the individual to enter the trade with a background in both shop skills and related information. He must have a knowledge of mathematics, blueprint reading, methods of construction and a thorough knowledge of building materials.

The modern carpenter will work on new construction, maintenance, and repair of many types of structures, both residential and commercial. He should have an understanding of building materials, concrete form construction, rough framing, roof and stair construction, the application of interior and exterior trim, and the installation of cabinets and fixtures.

Most carpenters are employed by contractors in the building construction fields. When specializing in a particular phase of carpentry, the job is designated according to the specialty as layout carpenter, framing carpenter, concrete form carpenter, scaffolding carpenter, accoustical and insulating carpenter, and finish carpenter.

### **Job Description**

The carpenter constructs, erects, installs and repairs structures and fixtures of wood, plywood, wall board and other materials, using carpenters hand tools and power tools to conform to local building codes. He is required to use blueprints, sketches or building plans for information pertaining to type of material, dimensions, layout and design of structure, and method of construction.

# CARPENTRY

## SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Hours Credit
FIRST QUARTER			Class	Lab.	
ENG	1101	Reading Improvement	2	0	2
MAT	1101	Fundamentals of Mathematics	5	0	5
DFT	1110	Blueprint Reading: Building Trades	0	3	1
CAR	1101	Carpentry	3	15	8
			10	18	16

## SECOND QUARTER

ENG	1102	Communication Skills	3	0	3
MAT	1112	Building Trades Mathematics	3	0	3
DFT	1111	Blueprint Reading & Sketching	0	3	1
CAR	1102	Carpentry: Millwork and Cabinetmaking	3	15	8
			9	18	15

## THIRD QUARTER

PSY	1101	Human Relations	3	0	3
CAR	1113	Carpentry: Estimating	3	3	4
CAR	1103	Carpentry: Framing	3	15	8
			9	18	15

## FOURTH QUARTER

CAR	1114	Building Codes	3	0	3
BUS	1103	Small Business Operations	3	0	3
CAR	1104	Carpentry: Finishing	3	18	9
			9	18	15

# MASONRY

## INTRODUCTION

### **Purpose of Curriculum**

Masons are the craftsmen in the building trades that work with artificial stone, brick, concrete masonry units, stone and the like. During the past decade there has been a steady increase in the demand for these craftsmen. As building construction continues to increase, the demand for bricklayers, cement masons, and stonemasons will also increase.

This curriculum in Masonry is designed to train the individual to enter the trade with the knowledge and basic skills that will enable him to perform effectively. He must have a knowledge of basic mathematics, blueprint reading and masonry technology. He must know the methods used in laying out a masonry job with specific reference to rigid insulation, refractories, and masonry units specified for residential, commercial and industrial construction.

Most employment opportunities for masons may be found with contractors in new building construction. However, a substantial proportion of masons are self-employed or work with contractors doing repair, alteration, or modernization work.

### **Job Description**

Most masons are employed by contractors in the building construction fields to lay brick, and blocks made of tile, concrete, glass, gypsum or terra cotta; to construct or repair walls, partitions, arches, sewers, furnaces and other masonry structures.

After gaining experience in the various types of the masonry trade along with leadership training, it is possible for the tradesman to become a foreman, inspector and eventually a contractor.

MASONRY

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter
			Class	Lab.	Hours Credit
FIRST QUARTER					
MAS	1101	Bricklaying	5	15	10
MAT	1101	Fundamentals of Mathematics	5	0	5
DFT	1110	Blueprint Reading: Building Trades	0	3	1
			10	18	16
SECOND QUARTER					
MAS	1102	Bricklaying	5	15	10
MAT	1112	Building Trades Mathematics	3	0	3
DFT	1111	Blueprint Reading & Sketching	0	3	1
			8	18	14
THIRD QUARTER					
MAS	1103	General Masonry	5	15	10
MAS	1113	Masonry Estimating	3	3	4
DFT	1112	Blueprint Reading & Sketching	0	3	1
			8	21	15

# **WELDING**

## **INTRODUCTION**

### **Purpose of Curriculum**

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed Manpower Survey shows quite clearly that many welders will be needed annually to fill present vacancies in the State.

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques, and skills essential for successful employment in the welding field and metals industry.

The field of welding offers a person prestige, security, and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production shop, job shop, and many others.

### **Job Description**

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding metals, arc, gas, and resistance welding are the three most important.

The principal duty of the welder using manual procedure is to control the melting by directing the heat, from either an electric arc or gas welding torch, and to add filler metal where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

WELDING

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter
			Class	Lab.	Hours Credit
FIRST QUARTER					
WLD	1120	Oxyacetylene Welding and Cutting	3	12	7
MAT	1101	Fundamentals of Mathematics	5	0	5
DFT	1104	Blueprint Reading: Mechanical	0	3	1
PHY	1101	Applied Science	3	2	4
ENG	1101	Reading Improvement	2	0	2
			13	17	19
SECOND QUARTER					
WLD	1121	Arc Welding	3	12	7
MAT	1103	Geometry	3	0	3
DFT	1117	Blueprint Reading: Welding	0	3	1
PHY	1102	Applied Science	3	2	4
ENG	1102	Communication Skills	3	0	3
			12	17	18
THIRD QUARTER					
WLD	1124	Pipe Welding	3	12	7
WLD	1123	Inert Gas Welding	1	3	2
WLD	1112	Mechanical Testing and Inspection	1	3	2
DFT	1118	Pattern Development and Sketching	0	3	1
PSY	1101	Human Relations	3	0	3
			8	21	15
FOURTH QUARTER					
WLD	1122	Commercial and Industrial Practices	3	9	6
WLD	1125	Certification Practices	3	6	5
MEC	1112	Machine Shop Processes	0	6	2
BUS	1105	Industrial Organizations	3	0	3
			9	21	16

## **SPECIALIZED COURSES**

**(1 to 3 Quarters In Length)**

## **Textile Manufacturing**

These courses are designed to give a general background in the skills and knowledge involved in textile processes. The student will learn the technical and scientific points of each process. Instruction will include the mechanics of each machine, the relation of one part to another, the function of each part, and machine operator's duties. Calculations including draft, twist, and production for the different machines, will be stressed. Courses available in the field are:

Introduction to Textiles  
Reading Improvement  
Yarn Manufacturing  
Plant Visitation  
Communication Skills  
Industrial Organization  
Management

Textile Mathematics  
Weaving  
Technical Report Writing  
Time and Motion Study  
Loom Fixing

## **Furniture Manufacturing**

These courses provide the necessary training for a person to enter the furniture industry on a semiskilled level in one or more areas: machining, sanding and assembling, or finishing. This training is to be accomplished mainly through practical experience in the shop courses, with essential background information in the theory of materials, machines, and techniques common to the industry. The theory and related information included in the program are to provide the student with the information which will assist him in the advancement into more responsible positions of the furniture industry.

## **Carpentry**

These courses are designed to subject a student to the fundamentals of carpentry work and the basic procedures of cabinet making. Students will begin with hand tools, and progress into the woodworking machines found in a cabinet shop. The carpentry work will begin with the masonry foundation and progress to the finished building. Some consideration will be given to industrial buildings, as compared to residential buildings.

## **COURSE DESCRIPTIONS**

## **COURSE NUMBERING SYSTEM**

- 1—All Freshman Technical Courses are indicated by a three-letter prefix preceded by the letter “T” and numbered between 100 and 200.
- 2—All Sophomore Technical Courses are indicated by a three-letter prefix preceded by the letter “T” and numbered between 200 and 300.
- 3—All Vocational Courses are indicated by a three-letter prefix and numbered between 1000 and 2000.

## COURSE DESCRIPTIONS

### AUTOMOTIVE MECHANICS

	Hours Per Week	Quarter Hours Credit
Class	Lab.	
<b>PME 1101 Internal Combustion Engine</b>	3 12	7

Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing.

Prerequisite: None.

<b>PME 1102 Engine Electrical and Fuel Systems</b>	5 12	9
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A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system.

Prerequisite: PME 1101.

<b>AUT 1121 Braking Systems</b>	3 3	4
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A complete study of various braking systems employed on automobiles and light weight trucks. Emphasis is placed on how they operate, proper adjustment, and repair.

Prerequisite: PHY 1102.

<b>AUT 1123 Automotive Chassis and Suspension Systems</b>	3 9	6
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Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end alignment.

Prerequisite: PME 1102.

<b>AUT 1124 Automotive Power Train Systems</b>	3 9	6
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Principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair.

Prerequisites: PHY 1102, AUT 1123.

<b>AUT 1125 Automotive Servicing</b>	3 9	6
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Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of

automotive systems, providing a full range of experiences in testing, adjusting, repairing and replacing.

Prerequisites: AUT 1123, AUT 1121, AHR 1101.

**AHR 1101 Automotive Air Conditioning** 2 3 3

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.

Prerequisite: PHY 1102.

## BUSINESS EDUCATION

**T-BUS 101 Introduction to Business** 5 0 5

A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management.

Prerequisite: None.

**T-BUS 102 Typewriting** 2 3 3

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

Prerequisite: None.

**T-BUS 103 Typewriting** 3 3 3

Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms.

Prerequisite: T-BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.

**T-BUS 104 Typewriting** 2 3 3

Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms.

Prerequisite: T-BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.

**T-BUS 106 Shorthand** 3 2 4

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases.

Prerequisite: None.

**T-BUS 107 Shorthand** 3 3 4

Continued study of theory with greater emphasis on dictation and elementary transcription.

Prerequisite: T-BUS 106 or the equivalent.

**T-BUS 108 Shorthand** 3 2 4

Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription.

Prerequisite: T-BUS 107.

**T-BUS 110 Office Machines** 2 2 3

A general survey of business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.

Prerequisite: None.

**T-BUS 112 Filing** 3 0 3

Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing.

Prerequisite: None.

**T-BUS 115 Business Law** 3 0 3

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

Prerequisite: None.

**T-BUS 116 Business Law** 3 0 3

Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights.

Prerequisite: T-BUS 115.

**T-BUS 120 Accounting** 5 2 6

Principles, techniques and tools of accounting, for understanding the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.

Prerequisite: T-MAT 110.

**T-BUS 121 Accounting** 5 2 6

Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.

Prerequisite: T-BUS 120.

**T-BUS 123 Business Finance** 3 0 3

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing.

Prerequisite: None.

**T-BUS 124 Business Finance** 3 0 3

Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies.

Prerequisite: T-BUS 123.

**T-BUS 183E Terminology and Vocabulary** 3 0 3

To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices.

Prerequisite: T-BUS 107.

**T-BUS 205 Advanced Typewriting** 2 3\* 3

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents.

Prerequisite: T-BUS 104. Speed requirement, 50 words per minutes for five minutes.

**T-BUS 206E Dictation and Transcription** 3 2 4

Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material.

Prerequisite: T-BUS. 108.

**BUS 206M Dictation and Transcription  
(Medical) (4)**

Develops the skills of taking dictation and transcribing materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed.

Prerequisite: T-BUS 108.

**T-BUS 207 Dictation and Transcription** 3 2 4

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minutes required for five minutes on new material.

Prerequisite: T-BUS 206.

**BUS 207M Dictation and Transcription  
(Medical) (4)**

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business, technical, and professional offices.

Prerequisite: T-BUS 206.

**T-BUS 208E Dictation and Transcription** 3 2 4

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minutes required for five minutes on new material.

Prerequisite: T-BUS 207.

**BUS 208M Dictation and Transcription  
(Medical) (4)**

Principally a speed-building course, covering materials appropriate to the course of study, with emphasis on neatness as well as accuracy.

Prerequisite: T-BUS 207.

**T-BUS 211 Office Machines** 2 2 3

Instruction in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines.

Prerequisite: T-BUS 110.

**T-BUS 214 Secretarial Procedures** 3 2 4

Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims.

Prerequisite: None.

**T-BUS 215M Office Application (Elective)** 6 0 6

During the sixth quarter only, students are assigned to work in a business, technical, or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study.

Prerequisite: T-BUS 214, T-BUS 205, T-BUS 208, T-BUS 211.

**T-BUS 215E Office Application (Elective)** 6 0 6

During the sixth quarter only, students are assigned to work in a business, technical, or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study.

Prerequisite: T-BUS 214, T-BUS 205, T-BUS 208, T-BUS 211.

**T-BUS 217 Business Law** 3 0 3

A study of the powers, policies, methods, and procedures used by the various federal, state and local administrative agencies in promoting and regulating business enterprises. It includes a consideration of the constitutional and statutory limitations on these bodies and judicial review of administrative action.

Prerequisite: T-BUS 116.

**T-BUS 219 Credit Procedures and Problems** 3 0 3

Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included.

Prerequisite: T-BUS 120.

**T-BUS 229 Taxes** 3 2 4

Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance.

Prerequisite: T-BUS 121.

**T-BUS 232 Sales Development** 3 0 3

A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.

Prerequisite: None.

**T-BUS 233 Personnel Management** 3 0 3

Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, renumeration, labor relations, fringe benefits and security.

Prerequisite: None.

**T-BUS 235 Business Management** 3 0 3

Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements.

Prerequisite: None.

**T-BUS 237 Wholesaling** 3 0 3

The development of wholesaling; present day trends in the United States. A study of the functions of wholesaling.

Prerequisite: None.

**T-BUS 239 Marketing** 5 0 5

A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process.

Prerequisite: None.

**T-BUS 241 Sales Promotion Management** 3 0 3

Telescope and activities of sales promotion with emphasis on the coordination of advertising, display, special events, and publicity, external and internal methods of promoting business budgeting, planning, and implementing the plan.

Prerequisites: T-BUS 232, T-BUS 243.

**T-BUS 243 Advertising** 3 2 4

The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.

Prerequisite: None.

**T-BUS 245 Retailing** 3 0 3

A study of the role of retailing in the economy, including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends.

Prerequisite: None.

**T-BUS 247 Business Insurance** 3 0 3

A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included.

Prerequisite: None.

**T-BUS 255 Interpreting Accounting Records** 3 0 3

Designed to aid the student in developing a "use understanding" of accounting records, reports and financial statements. Interpretation, analysis, and utilization of accounting statements.

Prerequisite: T-BUS 121.

**T-BUS 266 Budget and Record Keeping** 3 0 3

The basic principles, methods, and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record keeping in order to evaluate the effectiveness of budget planning.

Prerequisite: T-BUS 121.

**T-BUS 271 Office Management** 3 0 3

Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems.

Prerequisite: None.

**T-BUS 272 Principles of Supervision** 3 0 3

Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed.

Prerequisite: None.

**BUS 284M Terminology and Vocabulary  
(Medical) (3)**

Greater emphasis on an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in a professional office.

Prerequisite: T-BUS 383.

**BUS 1103 Small Business Operations** 3 0 3

An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.

Prerequisite: None.

**BUS 1105 Industrial Organizations** 3 0 3

Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost.

Prerequisite: None.

## CARPENTRY

	Hours Per Week		Quarter
	Class	Lab.	Hours Credit
<b>CAR 1101 Carpentry</b>	3	15	8

A brief history of carpentry and present trends of the construction industry. The course will involve operation care and safe use of carpenters hand tools and power tools in cutting, shaping and joining construction materials used by the carpenter. Major topics of study will include theoretical and practical applications involving: materials and methods of construction; building layout; preparation of site; footings and foundation wall construction including form construction and erection.

Prerequisite: None.

<b>CAR 1102 Carpentry: Millwork and Cabinetmaking</b>	3	15	8
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Cabinet making and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment will be emphasized in learning methods of construction of millwork and cabinetry. Practical applications will include measuring, layout and construction of: base and wall cabinets, built in desk, door and window frames; stairs; and interior and exterior cornice and trim. Materials and finishes will also be studied.

Prerequisites: CAR 1101, DFT 1110.

<b>CAR 1103 Carpentry: Framing</b>	3	15	8
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Instruction is given in the principles and practices of frame construction beginning with the foundation sills and including: floor joist; subfloor; wall studs; ceiling joist, rafters, bridging, bracing, sheathing and interior wall partition. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction, truss construction, and post and beam construction. Application and selection of sheathing and roofing is included. Consideration is given to the coordination of carpentry work with installation of the mechanical equipment such as: electrical, air conditioning, heating, and plumbing.

Prerequisites: CAR 1101, DFT 1111.

<b>CAR 1104 Carpentry: Finishing</b>	3	18	9
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Exterior and interior trim and finish carpentry will complete the general carpentry program. Included will be materials and methods used in finishing carpentry such as: exterior cornice, door and window trim; interior flooring, door and window facing, moldings, and cornice construction; installation of hardware, and installation of built in equipment and cabinets.

Prerequisites: CAR 1103, DFT 1111.

<b>CAR 1113 Carpentry: Estimating</b>	3	3	4
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This is a practical course in quantity "take off" from prints of jobs performed by the carpenter. Figuring the quantities of materials needed and costs of building various components and structures.

Prerequisites: DFT 1111, MAT 1112.

<b>CAR 1114 Building Codes</b>	<b>3</b>	<b>0</b>	<b>3</b>
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A study is made of building codes and the minimum requirements for local, county, and state construction regulations. This involves safety, sanitation, mechanical equipment and materials. Also, a review will be made of the minimum property requirements of the Federal Housing Administration and the North Carolina State Code.

Prerequisite: CAR 1103.

Corequisite: CAR 1104.

## COSMETOLOGY

	Hours Per Week	Quarter
	Class	Hours Credit
<b>COS 1101 Introduction to Cosmetology</b>	5	1 66

Designed to give the student a background for the profession and an understanding of the laws and civic responsibilities involved.

<b>COS 1102 Bacteriology, Sanitation and First Aid</b>	5	2 77
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A study of bacteriology to prevent the spread of disease in the shops, and instructions in sanitary measures and laws. Emphasis is placed on safety and methods of rendering first aid. Also instruction in health needs and habits of an individual.

### **COS 1103 Shampoo and Rinse**

This course covers the theory and practical training necessary to develop the manipulative skill shampooing. Emphasis is placed on composition and application of various rinses.

<b>COS 1105 Finger Waving and Pin Curling</b>	1	9 110
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A study of hair, use of comb, fingers, and waving lotion to produce a wave. The different styles of finger waving, pin curling, and roller curl are studied to enable the student to make application of finger waving and pin curling to various hair styles.

<b>COS 1106 Hair Shaping</b>	1	9 110
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Skill in the use of scissors and razor for shaping the hair is developed in this course. The student becomes familiar with various methods of cutting hair which may be applied to specific hair styling and permanent waving.

<b>COS 1107 Manicuring</b>	1	2 33
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The care of the hands and nails with emphasis on correct procedures, techniques, materials, and equipment used in giving a manicure. Also attention devoted to developing an understanding of the relationship between customer and operator.

<b>COS 1110 Permanent Waving — Cold and Heat Wave</b>	2	15 187
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This course is designed to provide a foundation for the practical art of permanent waving. Such topics as types of permanent wave, texture and elasticity of hair, and shaving of hair are included. Also the methods of permanent waving are taught.

**COS 1111 Hair Styling and Wig Care** 2 9 121

This course deals with the fundamental principles of hair styling and wig care. Through study of the contour of the head and face a student learns to see the relationship of these features to various hair styles. Also extensive practice in the proper use of sculpture curls, brushing, and combing are included.

**COS 1112 Personality** 2 0 22

Designed to develop a pleasing personality, charm, and poise necessary to every one in the beauty field.

**COS 1115 Tinting and Bleaching** 1 8 99

A study of techniques and applications involved in giving hair tints and bleaches; reaction of chemicals to certain textures of hair; composition, merits, and limitations of softeners, developers, hair tints, and bleaches.

**COS 1116 Scalp Treatments** 1 2 33

A study of the principles, techniques, materials, supplies and applications used in giving scalp treatments.

**COS 1118 Anatomy I** 3 2 55

The structure and function of the bones, muscles, and nerves with particular emphasis upon their application of cosmetology.

**COS 1119 Anatomy II** 2 4 66

A continuation of anatomy with additional emphasis on the structure and function of bones, muscles and nerves as applied to the work of the cosmetologist.

**COS 1120 Facials** 1 5 66

Designed to aid in the understanding of the principles, techniques, purpose, application and benefits of facial massage and cosmetic use. The various types of facials appropriate for different types of skin studied.

**COS 1121 Disorders of Skin,  
Nails and Hair** 5 3 88

The cause, identification, and treatment of common skin disorders and scalp diseases.

**COS 1122 Electricity** 3 1 44

Designed to acquaint the student to electricity in its different phases as applied to cosmetology. Such topics as wallplate, high frequency and electrodes are studied and discussed.

**COS 1123 Chemistry** 2 1 33

Designed to give the student an understanding of the basic principles of chemistry as they apply to the field of cosmetology. The major areas of work studied in this course are: fundamentals of chemistry, chemistry of soaps, hair preparations, nail preparations, deodorant preparations, creams and lotions, and facial preparations.

**COS 1124 Operational Management** 1 0 11

Designed to give the student an understanding of the principles relating to the operation of a beauty shop. Emphasis on equipment, finance, and management.

## DATA PROCESSING

	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-EDP 104 Introduction to Data Processing Systems</b>	3	2	4

Fundamental concepts and operational principles of data processing system, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses.

Prerequisite: None.

## DESIGN TECHNOLOGY

<b>T-DES 116 Philosophy of Design</b>	3	0	3
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This course will consist of selected readings and discussions of viewpoints, philosophies, and observations of leading designers. The existing dilemma concerning design ethics shall be incorporated.

Prerequisite: None.

<b>T-DES 117 Visual Design</b>	2	6*	4
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A study of design fundamentals to include the elements of design construction, the principles which determine the organization and relationship of these elements, and the analysis of design. Application of these fundamentals in drawing and elementary design problems leading to an understanding of form and space, primarily two-dimensional.

Prerequisite: None.

<b>T-DES 118 Visual Design</b>	3	3	4
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An extension of Visual Design T-DES 117 dealing with problems of two-dimensional manipulation and delineation of space. Particular emphasis is placed on the nature of color, color chords, organization, composition, optical and psychological implication.

Prerequisite: T-DES 117.

<b>T-DES 216 Technical Design</b>			
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An exploration of three-dimensional design using a variety of materials to define space and mass as they relate to function and aesthetics. Experiments in construction and ornamentation will be an integral part of the course.

Prerequisite: T-DES 117.

<b>T-DES 225 Furniture Styling</b>	2	3	5
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A comprehensive study of the periods and styles of furniture, from the Gothic Period to contemporary innovations, including factors which influenced their development. Methods of styling and decorating will be incorporated with the basic principles of design.

Prerequisite: None.

<b>T-DES 239    Rendering</b>	<b>2</b>	<b>3</b>	<b>3</b>
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This course will include techniques of heightening the three-dimensional effects of both pictorial and orthographic drawings through the use of variation in value, texture, and color. Additional depth of experience will be gained in preparing presentation pictorials.

Prerequisite: T-DFT 105.

<b>T-DES 245    Anatomical Relationships</b>	<b>5</b>	<b>0</b>	<b>5</b>
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This course is a comprehensive study of the human form as it relates to objects and activities of work, family living, and circulation. Emphasis is placed on the implications applicable to furniture and interior design.

Prerequisite: None.

<b>T-DES 250    Interior Planning and Display</b>	<b>3</b>	<b>3</b>	<b>4</b>
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This course is a study of architectural consideration, furniture grouping, correlation of finish, fabrics, and accessories as related to customer services and show room planning.

Prerequisites: T-DES 118, T-DFT 105, T-DES 239, T-DES 245.

**DRAFTING**

	<b>Hours Per Week</b>	<b>Quarter</b>
	<b>Class</b>	<b>Hours</b>
		<b>Credit</b>
<b>T-DFT 101    Technical Drafting</b>	<b>0</b>	<b>6*    2</b>

The field of drafting is introduced as the student begins study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced.

Prerequisite: None.

<b>T-DFT 102    Technical Drafting</b>	<b>0</b>	<b>6*    2</b>
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The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphical analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices for "details" and "working drawings," approved by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometrical objects.

Prerequisite: T-DFT 101.

<b>T-DFT 103    Technical Drafting</b>	<b>0</b>	<b>6*    2</b>
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Intersection and developments and their practical solutions. Where applicable, model solutions accompany the problems. The various techniques employed to produce and render isometric and oblique drawings, isometric, dimetric and trimetric projections, will be included.

Prerequisite: T-DFT 102.

<b>T-DFT 105    Design Drafting I</b>	2	6*	4
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Intersections and developments and their practical applications to pattern drawing, with model solutions. Mechanical and free-hand techniques used to produce isometric, dimetric, trimetric, and perspective drawings incorporating basic rendering techniques. Charts, graphs and other methods of visual presentation are included.

Prerequisite: T-DFT 102.

<b>T-DFT 204    Descriptive Geometry</b>	2	4	4
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Graphic analysis of space problems involving points, lines, planes, connectors, and a combination of these. Practical design problems will be stressed with analytical verification where applicable. Visualization shall be stressed on every problem.

Prerequisites: T-DFT 102, T-MAT 102.

<b>T-DFT 205    Design Drafting I</b>	2	6*	4
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Basic design is introduced in the study of motion transfer mechanisms as they relate to power trains. Principles of design sketching, design drawing, layout drafting, detailing from layouts, production drawings and simplified drafting practices constitute areas of study. Types and methods of specifying materials and workmanship are an integral part of the course.

Prerequisites: T-DFT 204, T-MAT 102, T-PHY 102.

<b>T-DFT 206    Design Drafting II</b>	2	6*	4
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Research to solve a problem in design by consulting various manuals, periodicals, and through laboratory experiments. A written technical report, preliminary design sketches, layout drawings, detail drawings, assembly and sub-assembly drawings, pictorial drawings, exploded pictorial assembly, patent drawings and specifications are required as a part of the problem.

Prerequisites: T-DFT 205, T-DFT 210.

<b>T-DFT 211    Mechanisms</b>	3	2	4
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Mathematical and drafting room solutions of problems involving the principles of machine elements. Study of motions of linkages, velocities and acceleration of points within a link mechanism; layout methods for designing cam, belts, pulleys, gears and gear trains.

Prerequisites: T-DFT 201 and 204, T-MAT 103, T-PHY 106.

<b>T-DFT 212    Jig and Fixture Design</b>	2	6*	4
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Commercial standards, principles, practices and tools of jig and fixture design. Individual project and design work to acquaint students with the types of jigs and fixtures and their design.

Prerequisites: T-DFT 205, T-DFT 211.

<b>T-DFT 240    Furniture Drafting</b>	2	6*	4
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The student will become familiar with the types of drawings used in furniture making, general types of furniture based on function and market, including built-ins. Preliminary sketches will be followed by simple assembly-details and detail drawing of typical constructions for cases, frames, drawers, doors and seating places.

Prerequisite: T-DFT 105.

<b>T-DFT 241 Furniture Design Drafting</b>	<b>2</b>	<b>6*</b>	<b>4</b>
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The student will pursue the more complex detailing problems involving construction, carving delineations and less traditional materials such as formed plywood, plastics and metals. Specifications and bills of materials will be included.

Prerequisites: T-DFT 240, T-DES 118.

<b>T-DFT 242 Furniture Design Drafting</b>	<b>2</b>	<b>6*</b>	<b>4</b>
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Research to solve the design problem of developing a correlated furniture group using any necessary experiments and reference sources. A written report outlining and defining the entire project accompanied by preliminary sketches, presentation drawings, selected finished details and specifications is required as a part of the problem.

Prerequisites: T-DFT 241, all design courses.

<b>T-DFT 249 Merchandising Graphics</b>	<b>3</b>	<b>2</b>	<b>4</b>
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A study of graphic arts media, techniques, layout, type, and reproduction methods applicable to direct mail, display art, newspaper, magazine.

Prerequisites: T-DES 118, T-DES 239.

**DFT 1101 Schematics & Diagrams:**

<b>Power Mechanics</b>	<b>0</b>	<b>3</b>	<b>1</b>
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Interpretation and reading of blueprints. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes.

Prerequisite: None.

<b>DFT 1104 Blueprint Reading: Mechanical</b>	<b>0</b>	<b>3</b>	<b>1</b>
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Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes.

Prerequisite: None.

<b>DFT 1110 Blueprint Reading: Building Trade</b>	<b>0</b>	<b>3</b>	<b>1</b>
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Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.

Prerequisite: None.

<b>DFT 1111 Blueprint Reading &amp; Sketching</b>	<b>0</b>	<b>3</b>	<b>1</b>
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Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevations, chimneys, fireplaces, arches and cavity wall construction. Development of proficiency in making three view and pictorial sketches.

Prerequisite: DFT 1110.

<b>DFT 1112 Blueprint Reading &amp; Sketching</b>	<b>0</b>	<b>3</b>	<b>1</b>
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Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings will be studied with emphasis on the plot plan, floor plan, basement and/or foundation plan, walls and various detailed drawings of masonry work.

Prerequisite: DFT 1111.

**DFT 1113 Blueprint Reading: Electrical** 0 3 1

Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course.

Prerequisite: DFT 1110.

**DFT 1117 Blueprint Reading: Welding** 0 3 1

A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications.

Prerequisite: DFT 1104.

**DFT 1118 Pattern Development and Sketching** 0 3 1

Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates.

Prerequisite: None.

**DFT 1121 Drafting** 3 12 7

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time.

Prerequisite: None.

**DFT 1122 Drafting** 3 6 5

The trainee will study simple and successive revolutions and their applications to practical problems. Sections and conventions will be studied and both detail and assembly sections will be drawn. Intersections and developments will be studied by relating the drawing to the sheet metal trades. Models of the assigned drawings will be made from construction paper, cardboard, or similar materials as a proof of the solution to the problems drawn.

Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced and dimensioning and sectioning of oblique and axonometric pictorials will be done.

Prerequisite: DFT 1121.

**DFT 1125 Descriptive Geometry** 2 3 3

Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Where applicable, each graphical solution shall be accompanied by the analytical solution.

Prerequisite: DFT 1121.

**DFT 1131 Mechanical Drafting** 3 12 7

An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasteners: keys, rivets,

springs, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with the study of basic mechanisms of motion transfer; gears, cams, power trains, pulleys, belting and methods of specifying and calculating dimensions will be studied. Drawings will be made involving these mechanisms.

Prerequisite: DFT 1122.

**DFT 1132 Mechanical Drafting** 3 12 7

Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a tool, jig, fixture or simple machine and learn principles of design, handbook and manual usage.

Prerequisite: DFT 1131.

**DFT 1135 Furniture Drafting** 3 12 7

An introduction to furniture drafting. Anatomical relationships influencing furniture construction and design. Furniture sizes and influencing factors. Construction details, and standard furniture parts. Scale drawings and full-size drawings will be made. Dimensioning practices and notes will be studied.

Prerequisite: DFT 1122.

**DFT 1136 Furniture Drafting** 3 15 8

The "working drawing" will be studied and a complete set of drawings will be made of a group of furniture. Related architectural considerations will be included. Notes and materials list will accompany the set of drawings.

Prerequisites: DFT 1135, UPH 111, CAB 1110.

**DFT 1137 Furniture Specifications** 3 0 3

Furniture specifications and billing of materials will be studied. Materials, fabrication, workmanship, finishes, crating and shipping instructions will be included.

Prerequisites: DFT 1135, UPH 1111, CAB 1110.

**DFT 1138 Furniture Styling and Decoration** 3 0 3

A study of the periods and styles of furniture and of the factors which influenced their development. Methods of styling and decorating will be included along with basic principles of design.

Prerequisites: UPH 1111, CAB 1110.

**ECONOMICS**

	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-ECO 102 Economics</b>	3	0	3

The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large.

Prerequisite: None.

**T-ECO 104 Economics**

3 0 3 3

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems.

**Prerequisite:** T-ECO 102.

**T-ECO 108 Consumer Economics**

3 0 3 3

Designed to help the student use his resources of time, energy, and money to get the most out of life. It gives the student an opportunity to build useful skills in buying, managing his finances, increasing his resources, and to understand better the economy in which he lives.

**Prerequisite:** None.

# ELECTRICAL

		Hours Per Week	Quarter Hours Credit
		Class	Lab.
<b>ELC 1112</b>	<b>Direct and Alternating Current</b>	5	12
			9

A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analysis of direct current circuits by Ohm's Law and Kirchhoff's Law. A study of the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits.

**Prerequisite:** None.

## ELC 1113 Alternating Current and Direct Current and Machines and Controls

5            12            9

Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances such as: thermostats, times, or sequencing switches.

**Prerequisites:** ELC 1112, MAT 1115.

## ELC 1124 Residential Wiring

5                      9                      8

Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups.

Prerequisites: ELC 1113, DFT 1110.

## ELC 1125 Commercial and Industrial Wiring

5            12            9

Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems.

**Prerequisites:** ELN 1118, ELC 1124.

## ELECTRONICS

	Hours Per Week		Total Contact Hours
	Class	Lab.	
<b>T-ELN 201 Industrial Controls</b>	3	2	4

Industrial controls is the study of modern methods of controlling machinery by electronic circuitry. Machinery controls and electronic mechanisms that automatically operate machines will be studied. Types of motors, generators, control signals and devices, thyratrons, gates, switches, and servomechanism circuits are major areas of study.

Prerequisite: T-PHY 103.

<b>ELN 1118 Industrial Electronics</b>	3	6	5
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Basic theory, operating characteristics, and application of vacuum tubes such as: diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes, and other basic applications.

Prerequisite: ELC 113.

<b>ELN 1119 Industrial Electronics</b>	3	6	5
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Basic industrial electronic systems such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyatron tubes, and other basic types of systems commonly found in most industries.

Prerequisite: ELN 1118.

## ENGLISH

<b>T-ENG 101 Grammar</b>	3	0	3
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Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.

Prerequisite: None.

<b>T-ENG 102 Composition</b>	3	0	3
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Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition.

Prerequisite: T-ENG 101.

<b>T-ENG 103 Report Writing</b>	3	0	3
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The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.

Prerequisite: T-ENG 102.

**T-ENG 204 Oral Communication** 3 0 3

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.

Prerequisite: T-ENG 101.

**T-ENG 206 Business Communication** 3 0 3

Develops skills in techniques in writing business communications. Emphasis is placed on writing action—getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry.

Prerequisite: T-ENG 102.

**ENG 1101 Reading Improvement** 2 0 2

Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units.

Prerequisite: None.

**ENG 1102 Communication Skills** 3 0 3

Designed to promote effective communication through correct language usage in speaking and writing.

Prerequisite: ENG 1101.

## FURNITURE

	Hours Per Week		Total
	Class	Lab.	Contact Hours
<b>T-CAB 101 Furniture Processes</b>	3	3	4

A comprehensive study of materials and methods of furniture manufacturing. Classification, characteristics, and uses of wood species, veneer and manufactured board processes and uses will be studied. Production wood working operations and methods using circular saws, jointer, planer, band saw, jig saw, drill press, lathe, shaper, router and portable hand tools will be explored. Wood joints, giving processes, fasteners and assembly procedures will be included.

Prerequisite: None.

**T-UPH 102 Furniture Processes** 3 3 4

The preparation of woods, types of finishes and their application, equipment and processes will be studied. Procedures for joining wood and other commonly used materials and appliques are included. Forms of upholstery, equipment, materials and processes will be explored. Functional and decorative hardware and mechanisms will be studied.

Prerequisite: T-CAB 101.

**CAB 1110 Case Goods Materials  
and Methods**

2 3 3

A comprehensive study of the materials and methods of the furniture making trade. Woods, metals, plastics, and other materials used in making of case goods. Basic woodworking operations and methods of joining of wood. Appliques and edgings, and hardware will be included.

Prerequisite: None.

**UPH 1111 Upholstery Materials and Methods**

2 0 2

Materials used in upholstering and their effect on design and drawing of plans for furniture. Types of materials and their characteristics, methods of fastening, accessory materials, frame types and construction, and processes of fabricating are included in this course.

Prerequisite: None.

**PRODUCTION ASSISTANT  
(Furniture Option)  
TENTATIVE COURSES**

	Class	Lab.	Credit
<b>FURN 1101 Cost Records &amp; Cost Estimates</b>	2	0	2

Elements of cost (materials, labor, overhead, etc.). Materials cost deals with price and grade, cost of delivery and storage, and percent utilization. Labor cost studies deal with such factors as time required, hourly rate, quantities produced, turnover and cost of training. Overhead costs are studied over specific periods of time with advantages and limitations of prorating overhead items of cost.

<b>FURN 1102 Production Control</b>	1	4	3
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Production planning, dispatching, progress reporting, adjusting and replanning. Systems and charts which help effectively control production will be developed and studied. Material wastes controls, labor controls, indirect labor controls, and overhead controls as they relate to production control will be dealt with.

<b>FURN 1103 Construction and Billing</b>	2	6	4
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Emphasis on construction for satisfactory performance in service, adequate strength and rigidity, and low cost. Once construction has been determined, students make accurate bills of material and other manufacturing information for the shop.

<b>FURN 1104 Characteristics of Woods</b>	1	0	1
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Structure (very elementary only). Wood-moisture relations. Shrink, swell and warp. Effect of grain on strength and related properties. Machineability.

<b>FURN 1105 Glues</b>	1	0	1
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Types of glues with operating advantages and disadvantages. Factors affecting strength of glue joints. Time factors, temperature factors and pressure factors in using glue. Gap filling characteristics. Effect of grain orientation.

<b>FURN 1107</b>	<b>Wood Finishes</b>	<b>1</b>	<b>3</b>	<b>2</b>
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Preparing surface for finish. Process for color, filling of pores, sealing, sanding, body coats, rubbing. Cure by drying out solvents, by oxidation, by polymerization. Time, temperature, and air circulation requirements for various finishes. Causes and cures of defects in finishes.

<b>FURN 1106</b>	<b>Furniture Sanding</b>	<b>1</b>	<b>3</b>	<b>2</b>
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<b>FURN 1108</b>	<b>Furniture Manufacturing and Processing Equipment I</b>	<b>1</b>	<b>4</b>	<b>3</b>
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This course deals with the setting up, operating procedures, capacities, and safety in working with various pieces of furniture equipment including tenoner, knife grinding machine, and sanding equipment.

<b>FURN 1109</b>	<b>Furniture Manufacturing and Processing Equipment II</b>	<b>1</b>	<b>4</b>	<b>3</b>
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This is a continuation of Furniture Manufacturing and Processing Equipment I and will deal with more complicated types of furniture equipment currently in use in the Lenoir area.

<b>FURN 1110</b>	<b>Method Standard Data</b>	<b>3</b>	<b>3</b>	<b>3</b>
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Motion study such as is needed to intelligently use predetermined time standards. Practice in building up standard times for specific operations using tables of predetermined times for the elements of the operation.

<b>FURN 1111</b>	<b>Collecting and Reporting Information</b>	<b>2</b>	<b>2</b>	<b>3</b>
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This course deals with the development of methods of collecting different types of data and information needed in the furniture industry for better production control, cost estimates, and cost analysis. Emphasis will be given to accurate collections of data and methods of presenting it neatly and effectively.

<b>FURN 1112</b>	<b>Routing and Process Sequences</b>	<b>1</b>	<b>3</b>	<b>2</b>
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Analysis of proper sequence of operations. Use of such charts as are helpful. Study of temperature and time elements as are necessary for satisfactory processing. Studies of alternate processes.

<b>FURN 1113</b>	<b>Quality Control</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Setting quality standards for customer acceptance. Final inspection to police these standards. Prior inspections and specifications to achieve final quality standard at minimum cost. Dimensions, tolerances, gages and other techniques to control dimensions. Qualities other than dimensions are more intangible. How to set standards and police performance in such areas. Receiving inspection, in process inspection, sampling.

<b>FURN 1114</b>	<b>Supervisory Responsibilities</b>	<b>3</b>	<b>0</b>	<b>3</b>
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This course will deal with such topics as fundamentals of supervision, relationships on the job, human relations, performance and job evaluation, the art of motivating, people, and effective communications.

**INDUSTRIAL SCIENCE**

		Hours	Per Week	Total
		Class	Lab.	Contact Hours
T-ISC 201	Industrial Organization and Management	3	0	3

Organizational structure for industrial management; operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting and markets, selection and layout of physical facilities; selection, training and supervision of personnel as found in typical industrial organizations.

Prerequisite: None.

<b>T-ISC 214</b>	<b>Product Development</b>	<b>3</b>	<b>0</b>	<b>3</b>
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This course of study is to familiarize the student with product development as it relates to the complete manufacturing organization. The evolution from original idea to retailer involving sales, design and engineering, cost, plant production, shipping, and outside agencies.

Prerequisite: None.

**MASONRY**

<b>MAS 1101</b>	<b>Bricklaying</b>	<b>5</b>	<b>15</b>	<b>10</b>
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The history of the bricklaying industry. Clay and shell brick, mortar, laying foundations, laying bricks to a line, bonding, and tools and their uses. Laboratory work will provide training in the basic manipulative skills.

Prerequisite: None.

<b>MAS 1102</b>	<b>Bricklaying</b>	<b>5</b>	<b>15</b>	<b>10</b>
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Designed to give the student practice in selecting the proper mortars, layout, and construction of various building elements such as foundations, walls, chimneys, arches and cavity walls. The proper use of bonds, expansion strips, wall ties and caulking methods are stressed.

Prerequisite: MAS 1102.

<b>MAS 1103</b>	<b>General Masonry</b>	<b>5</b>	<b>15</b>	<b>10</b>
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Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels, decorative stone, granite, marble, adhesive terra cotta and modular masonry construction theory and techniques.

Prerequisite: MAS 1102.

<b>MAS 1113    Masonry Estimating</b>	<b>3</b>	<b>3</b>	<b>4</b>
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This is a practical course in quantity “take off” from prints of the more common type jobs for bricklayers and masons. Figuring the quantities of materials needed and costs of building various components and structures.  
Prerequisite: MAS 1103.

MATHEMATICS

	<b>Hours Per Week</b>	<b>Quarter</b>
	<b>Class</b>	<b>Hours Credit</b>
<b>T-MAT 101    Technical Mathematics</b>	<b>5</b>	<b>0        5</b>

The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed.  
Prerequisite: Satisfactory evidence that admission requirements have been met.

<b>T-MAT 102    Technical Mathematics</b>	<b>5</b>	<b>0        5</b>
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A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binominal expansion, complex numbers, solution of oblique triangles and graphs of the trigonometric functions are studied in depth.  
Prerequisite: T-MAT 101.

<b>T-MAT 110    Business Mathematics</b>	<b>5</b>	<b>0        5</b>
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This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.  
Prerequisite: None.

<b>MAT 1101    Fundamentals of Mathematics</b>	<b>5</b>	<b>0        5</b>
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Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.  
Prerequisite: None.

<b>MAT 1102    Algebra</b>	<b>5</b>	<b>0        5</b>
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Basic concepts and operations of algebra: historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition and subtraction, graphing; exponents, logarithms, tables and interpolation.  
Prerequisite: None.

**MAT 1103    Geometry** 3            0            3

Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations.

Prerequisite: None.

**MAT 1104    Trigonometry** 3            0            3

Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations. All topics are applied to practical problems.

Prerequisite: MAT 1102, MAT 1103.

**MAT 1112    Building Trades Mathematics** 3            0            3

Practical problems dealing with volumes, weights, ratios; mensuration; and basic estimating practices for building materials.

Prerequisite: MAT 1101.

**MAT 1115    Electrical Math** 5            0            5

A study of fundamental concepts of algebra; basic operations of addition, subtraction, multiplication, and division; solution of first order equations, use of letters and signs, grouping, factoring, exponents, ratios, and proportions; solution of equations, algebraically and graphically; a study of logarithms and use of tables; an introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current.

Prerequisite: None.

# MECHANICS

	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-MEC 101    Machine Processes</b>	0	6*	2

An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming.

Prerequisite: None.

**T-MEC 205    Strength of Materials** 3            2            4

Study of principles and analysis of stresses which occur within machine and structure elements subjected to various types of loads such as static, impact, varying and dynamic. Analyses of these stresses are made as applied to thin-walled cylinders and spheres, riveted and welded joints, beams, columns and machine components.

Prerequisites: T-PHY 106, T-MAT. 103.

<b>T-MEC 210 Physical Metallurgy</b>	3	3*	4
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Introductory course in metallurgy, a basic study of the properties of metals and alloys. Analysis of the structure of metals and alloys, atomic structure, nuclear structure, and nuclear reactions. Solid (crystalline) structures, methods of designating crystal planes; liquid and vapor phases; phase diagrams; and alloy systems.

Prerequisite: T-PHY 101.

<b>T-MEC 211 Physical Metallurgy</b>	3	3*	4
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Properties of metals and alloys, the reactions of metals, diffusion, carburizing, metal bonding and homogenization; recrystallization and grain growth, age hardening, nitriding, internal oxidation; heat treatment of steel; laboratory experiments and demonstrations.

Prerequisite: T-MEC 210.

<b>T-MEC 235 Hydraulics and Pneumatics</b>	3	3*	4
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The basic theories of hydraulic and pneumatic systems. Combinations of systems in various circuits. Basic designs and functions of circuits and motors, controls, electrohydraulic servomechanisms, plumbing, filtration, accumulators and reservoirs.

Prerequisite: T-PHY 102.

<b>T-MEC 237 Control Systems</b>	2	4	4
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Hydraulic, pneumatic, mechanical electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance, accuracy, applications and their utilization in industrial processes.

Prerequisites: T-PHY 103, T-PHY 205.

<b>MEC 1113 Shop Processes</b>	2	3	3
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Study of practices used in metalworking shops: introduction to how materials can be utilized, and to the processes of shaping, forming and fabricating of metals. Demonstration of the metalworking lathes, grinders, drills, milling machines, shapers, planers, saws, broachers, gear cutting machines and finishing machines. A study of the capabilities of these machines.

Prerequisite: None.

<b>MEC 1114 Shop Processes</b>	2	3	3
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Comparison of the unit-production and mass-production systems. Casting, forging and allied processes, welding and sheet metal working processes are demonstrated and discussed. Mass-production methods are studied in relationship to precision dimensional control.

Prerequisite: MEC 1113.

<b>MEC 1115 Treatment of Ferrous Metals</b>	2	3	3
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Investigates the properties of ferrous metals and tests to determine their uses. Instructions will include some chemical metallurgy to provide a background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous metals, producing iron and steel, theory of alloys, shaping and forming, heat treatments for steel, surface treatments, alloy of special steel, classification of steels, and cast iron will be topic for study.

Prerequisite: None.

**MEC 1116 Treatment of Non-Ferrous Metals      2                      3                      3**

Continuation of the study of physical metallurgy. The non-ferrous metals; bearing metals (brass, bronze, lead) light metals (aluminum and magnesium) and copper and its alloys are studied. Powder metallurgy, titanium, zirconium, indium and vanadium are included in this course.

Prerequisite: MEC 1115.

## PHYSICS

	Hours Per Week	Class	Lab.	Quarter Hours Credit
<b>T-PHY 101 Physics: Properties of Matter</b>	3	2	4	

A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course.

Prerequisite: None.

<b>T-PHY 102 Physics: Work, Energy, Power</b>	3	2	4	
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The major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, forces, center of gravity and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas.

Prerequisites: T-PHY 101, T-MAT 101.

<b>PHY 1101 Applied Science</b>	3	2	4	
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An introduction to physical principles and their application in industry. Topics in this course include measurement; properties of solids, liquids, and gases; basic electrical principles.

Prerequisite: None.

<b>PHY 1102 Applied Sciences</b>	3	2	4	
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The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry, and principles of force, motion, work, energy, and power.

Prerequisite: PHY 1101.

## PRACTICAL NURSING EDUCATION

	Class	Lab.	Quarter
<b>NUR 1001 Practical Nursing I</b>	28	2	330

Designed to assist students in acquiring the knowledge, understandings, appreciations, and attitudes basic to effective nursing of patients of all ages and backgrounds. Emphasis is on nursing needs arising both from the individuality of the patient and from inability for self-care as a result of a health deviation. Patient-entered studies include analysis of patient needs, both through classroom study of hypothetical patient situations and through planned experiences in the clinical environment. Beginning



**NUR 1004    Practical Nursing IV**

12            24            396

Designed to introduce the student to care of patients with complex nursing needs and to the assisting role of the practical nurse in situations requiring judgments based on depth of knowledge. Clinical practice includes supervised care of labor patients and seriously ill adults and children.

**OBJECTIVES:** To assist advanced practical nursing students to acquire knowledge of needs of seriously ill patients to develop beginning skills in assisting the registered nurse and/or physician in complex nursing situations, and to make the transition to the role of graduate practical nurse.

**COURSE MATERIAL:** Needs of the Seriously Ill Patient  
Needs of Patients in Immediate Post-Operative Period  
Needs of the Labor Patient  
Needs of the Seriously Ill Child  
Assuming the Role of Graduate Practical Nurse

Prerequisite: NUR 1003.

**PSYCHOLOGY**

	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-PSY 112    Personality Development</b>	3	0	3

Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement.

Prerequisite: None.

<b>T-PSY 206    Applied Psychology</b>	3	0	3
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A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings and emotions are considered with particular reference to on-the-job problems. Other topics investigated are: employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community.

Prerequisite: None.

<b>PSY 1101    Human Relations</b>	3	0	3
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A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.

Prerequisite: None.

**SOCIAL SCIENCE**

<b>T-SSC 201    Social Science</b>	3	0	3
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An integrated course in the social sciences, drawing from the fields of anthropology, psychology, history, and sociology.

Prerequisite: None.

<b>T-SSC 202 Social Science</b>	<b>3</b>	<b>0</b>	<b>3</b>
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A further study of social sciences with emphasis on economics, political sciences, and social problems as they relate to the individual.

Prerequisite: T-SEC 201.

<b>T-SSC 205 American Institutions</b>	<b>3</b>	<b>0</b>	<b>3</b>
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A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker. The course dwells upon current local, national, and global problems viewed in the light of our political and economic heritage.

Prerequisite: None.

<b>T-POL 201 United States Government</b>	<b>3</b>	<b>0</b>	<b>3</b>
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A study of government with emphasis on basic concepts, structure, powers, procedures and problems.

Prerequisite: None.

## WELDING

	Hours Per Week		Quarter
	Class	Lab.	Hours Credit
<b>WLD 1101 Basic Gas Welding</b>	<b>0</b>	<b>3</b>	<b>1</b>

Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work.

Prerequisite: None.

<b>WLD 1112 Mechanical Testing and Inspection</b>	<b>1</b>	<b>3</b>	<b>2</b>
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The standard methods for mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guided-bend, nick-tear, notched-bend, tee-bend, nondestructive, V-notch, Charpy impact, etc.

Prerequisites: WLD 1120, WLD 1121.

<b>WLD 1120 Oxacetylene Welding and Cutting</b>	<b>3</b>	<b>12</b>	<b>7</b>
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Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of units. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

Prerequisite: None.

<b>WLD 1121 Arc Welding</b>	<b>3</b>	<b>12</b>	<b>7</b>
-----------------------------	----------	-----------	----------

The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal

alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized throughout the course in the use of tools and equipment.

Prerequisite: None.

**WLD 1122 Commercial and Industrial Practice      3                      9                      6**

Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspection.

Prerequisites: WLD 1120, WLD 1121.

**WLD 1123 Inert Gas Welding                                      1                      3                      2**

Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding.

Prerequisites: WLD 1120, WLD 1121.

**WLD 1124 Pipe Welding    3                      12                      7**

Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.

Prerequisite: WLD 1121.

**WLD 1125 Certification Practices                                      3                      6                      5**

This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds.

Prerequisites: WLD 1120, WLD 1121, WLD 1123, WLD 1124.



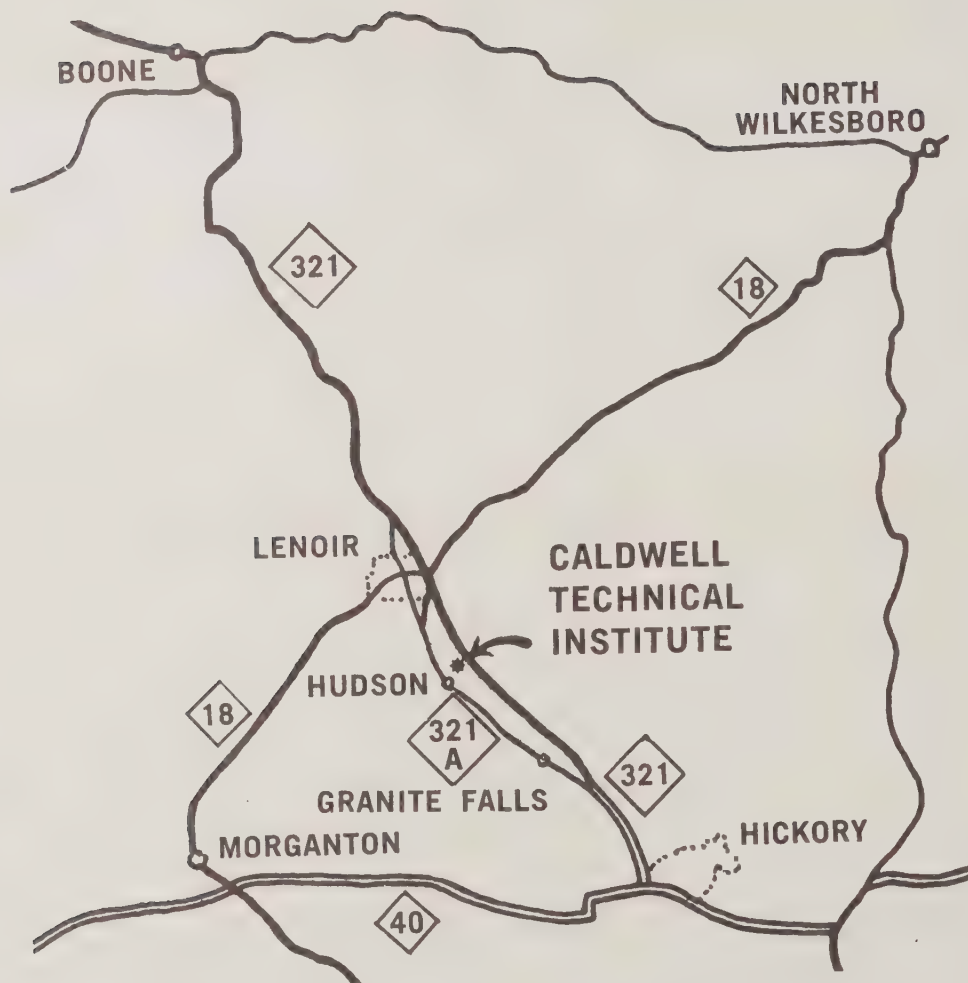
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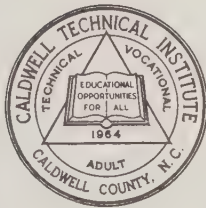
**Caldwell Technical Institute**

**CATALOG 1967-69**



Caldwell Technical Institute is located near Hudson, North Carolina, 6 miles south of Smith Crossroads, Lenoir and 10 miles north of Hickory, on Highway 321.

# CALDWELL TECHNICAL INSTITUTE *Bulletin*



## GENERAL CATALOG

LENOIR, NORTH CAROLINA  
Volume 2, No. 1, June 1967  
Entered as Third Class Matter  
in Post Office at Lenoir, N. C.

**TWO YEAR CATALOG**

**1967-1969**

Students having questions not answered in this publication may obtain further information from the Student Personnel Office, Caldwell Technical Institute, Box 600, Lenoir, North Carolina 28645.

Telephones:

Lenoir area .....	728-4323
Granite Falls & Hickory .....	396-3311

Caldwell Technical Institute is a comprehensive public Technical Institute operating under the North Carolina Department of Community Colleges. The institute is approved by the North Carolina State Board of Education.

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# ACADEMIC CALENDAR 1967-1968

## Fall Quarter 1967 (55 Instructional Days)

Registration	Mon. Tues., & Wed.	Sept. 18, 19, 20	
Classes Begin	Monday	Sept. 25	8:00 A.M.
Thanksgiving Holidays Begin	Wednesday	Nov. 22	10:30 P.M.
Classes Resume	Monday	Nov. 27	8:00 A.M.
Fall Quarter Ends	Tuesday	Dec. 12	10:30 P.M.
Final Examinations	Wed., Thurs., & Fri.	Dec. 13, 14, 15	

## Winter Quarter 1967-68 (54 Instructional Days)

Registration	Wed., Thurs., & Fri.	Dec. 13, 14, 15	
Christmas Holidays Begin	Friday	Dec. 15	10:30 P.M.
Classes Begin	Tuesday	Jan. 2	8:00 A.M.
Winter Quarter Ends	Friday	Mar. 15	10:30 P.M.
Final Examinations	Mon. Tues., & Wed.	Mar. 18, 19, 20	

## Spring Quarter 1967-68 (53 Instructional Days)

Registration	Mon. Tues., & Wed.	Mar. 18, 19, 20	
Classes Begin	Monday	Mar. 25	8:00 A.M.
Easter Holidays Begin	Thursday	April 11	10:30 P.M.
Classes Resume	Tuesday	April 16	8:00 A.M.
Spring Quarter Ends	Friday	June 7	10:30 P.M.
Final Examinations	Mon., Tues., & Wed.	June 10, 11, 12	

## Summer Quarter 1968 (53 Instructional Days)

Registration	Mon. Tues., & Wed.	June 10, 11, 12	
Classes Begin	Wednesday	June 19	8:00 A.M.
Independence Holidays Begin	Wednesday	July 3	10:30 P.M.
Classes Resume	Monday	July 8	8:00 A.M.
Summer Quarter Ends	Tuesday	Sept. 3	10:30 P.M.
Final Examinations	Wed., Thurs., & Fri.	Sept. 4, 5, 6	

## Fall Quarter 1968 (55 Instructional Days)

Registration	Mon. Tues., & Wed.	Sept. 16, 17, 18	
Classes Begin	Monday	Sept. 23	8:00 A.M.
Thanksgiving Holidays Begin	Wednesday	Nov. 27	10:30 P.M.
Classes Resume	Monday	Dec. 2	8:00 A.M.
Fall Quarter Ends	Tuesday	Dec. 10	10:30 P.M.
Final Examinations	Wed., Thurs., & Fri.	Dec. 11, 12, 13	

# ACADEMIC CALENDAR 1968-1969

## Winter Quarter 1968-69 (54 Instructional Days)

Registration	Wed., Thurs., & Fri.	Dec. 11, 12, 13	
Christmas Holidays Begin	Friday	Dec. 13	10:30 P.M.
Classes Begin	Thursday	Jan. 2	8:00 A.M.
Winter Quarter Ends	Tuesday	Mar. 18	10:30 P.M.
Final Examinations	Wed., Thurs., & Fri.	Mar. 19, 20, 21	

## Spring Quarter 1969 (52 Instructional Days)

Registration	Wed., Thurs., & Fri.	Mar. 19, 20, 21	
Classes Begin	Monday	Mar. 24	8:00 A.M.
Easter Holidays Begin	Thursday	April 3	10:30 P.M.
Classes Resume	Tuesday	April 8	8:00 A.M.
Spring Quarter Ends	Thursday	June 5	10:30 P.M.
Final Examinations	Fri., Mon. & Tues.	June 6, 9, 10	

## Summer Quarter 1969 (55 Instructional Days)

Registration	Fri., Mon. & Tues.	June 6, 9, 10	
Classes Begin	Monday	June 16	8:00 A.M.
Independence Holidays Begin	Thursday	July 3	10:30 P.M.
Classes Resume	Monday	July 7	8:00 A.M.
Summer Quarter Ends	Monday	Sept. 1	10:30 P.M.
Final Examinations	Tues., Wed., & Thurs.	Sept. 2, 3, 4	

## Fall Quarter 1969 (55 Instructional Days)

Registration	Mon., Tues., & Wed.	Sept. 22, 23, 24	
Classes Begin	Thursday	Sept. 25	8:00 A.M.
Thanksgiving Holidays Begin	Wednesday	Nov. 26	10:30 P.M.
Classes Resume	Monday	Dec. 1	8:00 A.M.
Fall Quarter Ends	Friday	Dec. 12	10:30 P.M.
Final Examinations	Mon., Tues., & Wed.	Dec. 15, 16, 17	
Christmas Holidays Begin	Wednesday	Dec. 17	



# A Message From the President

The Caldwell Technical Institute was founded upon the premise that it should become a "community school," offering programs at all levels to the extent of its legal authority, to all races, and to both sexes.

This commitment is being carried out and planned for through adult basic education courses for those who have not learned to read and write or who did not complete eighth grade, through courses designed to help persons who did not graduate from high school prepare themselves to take the high school equivalency exam, through courses and workshops designed to enable persons to live a fuller life and to solve problems that confront them, through extension courses designed for employed persons to improve their skills while continuing their employment, and through curriculum programs announced in this catalog which are designed to prepare persons for initial employment.

The announcements herein result from our commitment as a "community school," for hundreds of lay and professional citizens in Caldwell County have helped to analyze our needs and to design courses and programs to meet them.

It is our purpose to provide the highest quality programs possible at a cost which our citizens can afford.

H. Edwin Beam  
President



**DR. H. EDWIN BEAM, *President***



**REX G. SIGMON**  
*Director of Student  
Personnel*



**DAN N. STALLINGS**  
*Director of Adult  
and Evening Programs*



**RICHARD L. WALDRON**  
*Director of Vocational  
Technical Programs*

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DAN N. STALLINGS ..... *Director of Adult and Evening Programs*  
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versity of North Carolina); course work completed for Ed.D. (University  
of North Carolina).

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Associate Applied Science (Wyomissing Polytechnic Institute); B.S.  
(N. C. State University); Graduate work (N. C. State University).

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JOE AMOS .....Automotive Mechanics and Welding  
Former Instructor, Gaston Technical Institute and Catawba Valley  
Technical Institute. 14 years experience in teaching automotive mechanics.

KENNETH L. BEARD ....Learning Laboratory, Physics, Biology  
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Carolina, Chapel Hill).

ELIZA F. BISHOP .....English  
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IRENE BLEVINS .....Practical Nursing Education, Banner Elk  
B.S., (Montreat College, Asheville Memorial Mission Hospital School  
of Nursing).

ROSALIND C. CAMPBELL .....Library Science  
B.A., (Emory Henry College); M.A., (Appalachian State University).

JAMES C. CANTRELL .....Drafting  
B.S., (Western Carolina College); Additional work at North Carolina  
State University and Appalachian State University.

HOPE R. HAMILTON .....Secretarial Science  
B.S., (Southern Illinois University); M.A., (Appalachian State Univer-  
sity).

ROGER Z. HART .....Auto Mechanics Department  
B.S., (North Carolina State University).

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B.S., (Appalachian State University).

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A.B., (Lenoir Rhyne College); M.A. (Appalachian State University).

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B.S., (West Virginia Institute of Technology); M.A., (West Virginia  
University).

MARY LOUISE MARION ..... Practical Nursing Education  
B.S. (University of North Carolina at Greensboro).

CHARLES O. MCAFEE ..... Business Education  
B.S., (University of North Carolina); M.B.A. (Harvard Graduate  
Business School).

ROBERT SCHELLER ..... Electrical Installation and Maintenance  
Naval instructor in Electrical Installation and Maintenance, sixteen years.

ROBERT N. STYRES ..... Furniture  
B.S., (N. C. State University).

MYRTLE E. WATSON ..... Cosmetology  
Teachers certificate (Hickory Beauty School); Head Instructor for eight  
years.



# Introduction to Caldwell Tech

Several historical events are important in the development of the Caldwell Technical Institute.

The 1963 North Carolina General Assembly passed the Community College Act creating a system of comprehensive community colleges, technical institutes, and industrial education centers in the State under the State Board of Education.

In January, 1964, the Caldwell Technical Institute was tentatively approved by the State Board of Education. On March 28, 1964, the people of Caldwell county approved the institution through the bond note of \$600,000 for the purchase of the site and construction of the facilities and up to 5 cents tax authorization for operating the institution. Final approval by the State Board of Education followed on April 2, 1964.

The president was selected in October, 1964. The site was selected in January, 1965. Selection of the architect was made in February, 1965. New facilities were occupied in September, 1967.

## PURPOSES AND OBJECTIVES

Caldwell Technical Institute, serving primarily Caldwell, Watauga, and Avery counties and operating within the legal framework set by the North Carolina General Assembly, opens its doors to any person seeking an education. A "technical institute," as defined in the General Statutes of North Carolina, is an educational institution dedicated to the educational needs of the particular area for which it is established. It is charged with the responsibility of offering courses of a technical, of a vocational, and of a general adult nature. Not only is it committed to make training available for recent high school graduates but also for those persons already involved in the total community life and work.

Low tuition, easy accessibility, a comprehensive curriculum selected to meet the needs of a wide range of students and designed to change as the community it serves requires make the Institute an organization to serve the people as individuals and

the community as a whole and to allow both to reap the rewards of a more highly-trained, more fully-enriched citizenry. The Institute places first the individual needs, both socially and economically; therefore programs of study are scheduled for persons who desire to complete high school, for persons who desire personal improvement or vocational growth, and for those whose goal is a challenging and productive occupation.

The Institute is flexible in its educational objectives, programs and administrative organization in order to meet effectively new conditions and logical needs as they arise; thus providing for the development of skills and knowledge which will bring material and personal rewards for the areas it serves.

It is, therefore, engaged in a constant effort to determine overall needs of the community and its people and to meet those needs.

In keeping with the general purposes of Caldwell Technical Institute, the Board of Trustees, the administrative staff, and the faculty have adopted certain specific objectives. The Institute will endeavor to:

Provide inexpensive, continuing educational opportunities for out-of-school youth and adults at facilities located within commuting distance of people in the service area.

Provide effective teaching to all who enroll with a continuing interest in the individual in terms of behavior motivation and achievement.

Provide educational opportunities for adults who discontinued their formal training before mastering the basic skills of reading, writing, and arithmetic.

Provide curricula that will reflect the changing needs of the community and the training patterns for employment.

Provide technical training for those persons wishing to enter the more highly skilled occupations in business and industry.

Provide vocational training for students who are preparing to enter occupations at a trade level.

Provide both technical and vocational courses on a part-time basis for adults now employed.

Provide a two year program of board, general education for persons who desire college level work but who are not interested in specializing in either the technical or professional fields.

Provide general interest courses that meet the adult and community service needs of the people of the area.

Provide cultural opportunities to broaden the general education of the people of the community at large.

Provide an atmosphere which would inspire current students to encourage persons in secondary school as well as those out of school to give thought to further education.

Provide guidance services to each individual in order that he develop his potential to the fullest.

**LOCATION**

The Caldwell Technical Institute is located on a 78 acre tract of land in Hudson, North Carolina. Since the Institute is on Highway 321, it is accessible to the population centers of Lenoir (5 miles), Granite Falls (5 miles), and Hickory (10 miles).

**AREAS OF STUDY**

**General Education Curriculum**

College-level courses leading to the Associate in General Education Degree will be offered by Caldwell Technical Institute, beginning September 1967. These courses will be offered in the day and evening sessions and will include such courses as English, science, mathematics, social studies, art, and music, plus electives. Refer to the General Education section of the catalog.

**Technical Curricula**

Technical curricula expected to be offered by the Caldwell Technical Institute for the 1967-1969 Academic year include:

Business Administration	Library Technology
Executive Secretary	Manufacturing Engineering Tech.
Medical Secretary	Manufacturing Drafting & Design
Electronic Data Processing	Tech.

Graduates of these programs will be awarded the Associate in Applied Science Degree.

**Vocational Curricula**

Vocational programs are generally for one year or less in duration. Emphasis is given to specific manipulative skills or application of understanding. Some knowledge of mathematics, the sciences, and communicative skills is also required.

Vocational programs expected to be offered by the Caldwell Technical Institute for the 1967-1969 Academic years include:

Automotive Mechanics	Mechanical Drafting
Carpentry	Masonry
Cosmetology	Practical Nurse Education
Mechanical Drafting	Production Assistant (Furniture)
Electrical Installation and Maintenance	Textile Production
Electromechanical Mechanics	Welding
	Machine Shop

Graduates of these programs will be awarded a diploma by the Caldwell Technical Institute.

## **AREAS OF STUDY NON-CURRICULUM OFFERINGS**

### **Extension Offerings**

The Caldwell Technical Institute will offer annually a number of courses by extension for those persons who are employed, and who wish to up-grade their occupational levels.

Extension courses will be offered in the late afternoons and evenings, and may be offered in certain surrounding communities as well as on the campus.

Many of the extension courses will be the same general nature as those included in the one and two-year curriculum programs. Others will be for specific purposes of pre-employment or up-grading training to meet needs not necessarily met through curricular offerings.

Extension courses will be announced well in advance of the beginning dates.

Examples of extension offerings of a non-curriculum nature which could be offered include:

Creative Salesmanship	Firemanship Training
Advertising	(Series of Courses)
Personality Development	Nurses' Assistant Training
Accounting	Oral Communications
Bookkeeping	Principles of Supervision
Business Machine Operation	(Series of Courses)
Rapid Writing	Job Instruction Training
Principles of Management	Industrial Psychology
(Series of Courses)	Small Appliance Servicing and Repair

A certificate will be awarded for the satisfactory completion of each course offered by extension.

### **General Adult Education and Community Service Programs**

Adult and community services programs will normally consist of non-credit courses that lead to no degree or diploma. However,

a certificate will be awarded for the satisfactory completion of each adult or community service program.

Examples of types of offerings in this category follow:

Social Security	Personal Investments
Law for the Layman	Interior Decoration
Personal Income Tax	Home Appliance Repair
Pre-school Problems	Business Law
Human Relations	Discussion Groups:
North Carolina History	Great Decisions
First Aid	Great Books
Public Speaking	You and Your Community
Rapid Reading	Aging and You
Personal Typing	World Politics

### **Adult Basic Education**

Adult basic education programs are designed for adults who did not go to school, or who dropped out before completing the eighth grade.

Classes are offered on the 0-4 level and on the 5-8 level. Approximately 150 class hours (or six months) are required to complete each level.

### **Adult High School Diploma Program**

The adult high school equivalency program is a cooperative program between local school administrative units and the Caldwell Technical Institute to provide the necessary instruction which will enable the adult student to take the examination for the Caldwell County Board of Education's Adult High School Diploma.

The curriculum includes classes in English, mathematics, science, and social studies.

### **Others**

Cultural events of various kinds will be sponsored by Caldwell Technical Institute each year. These will be announced well in advance, open to the public, and generally free of charge. Certain types of events may, however, require charging a nominal admission fee.

## **ADMISSIONS**

### **Admission Requirements**

The Caldwell Technical Institute is a co-educational institution open to any individual meeting the admission requirements for

the particular course or area in which he wishes to enroll. These requirements vary with the areas of study offered by the Institute.

All applicants for the **technical curriculum** must be high school graduates, or be eighteen years of age or older and possess a high school equivalency certificate. The applicant must have satisfactorily completed at least two years of high school mathematics, preferably one year of algebra and one year of geometry. Physics and chemistry are also desirable courses for the technical program applicant to have completed.

Applicants for the **vocational curriculum** programs should also be high school graduates or equivalent; however, an applicant may be accepted in a vocational curriculum who possesses maturity, mental growth, attitudes, aptitudes, and interests necessary for success in the particular curriculum for which he is applying.

## **ADMISSION PROCEDURES**

### **(For One and Two-Year Programs)**

1. **Secure application form and make application for admission.** Application forms may be secured from your local guidance counselor or by writing the Caldwell Technical Institute, Box 600, Lenoir, North Carolina, or by calling telephone number 728-4323 in Lenoir or 396-3311 in Granite Falls. The application for admission should be very carefully and accurately completed and submitted to the Institute as early as possible to assure a place in the curriculum desired. Enrollment limits are set for almost all curriculum offerings.

2. **Tuition Deposit (Required)**

All applications submitted for the regular curriculum courses which begin after January 1, 1968, must be accompanied by a \$5.00 non-refundable deposit which will be applied to the tuition of the particular quarter the student is seeking enrollment.

3. **Submit a transcript of high school records and of any post-high school work taken.** These may be submitted at any time during the senior year in high school (if the applicant is still attending high school). An applicant meeting all other requirements will be given provisional acceptance pending receipt of his final grades from high school.

4. **Complete the General Aptitude Test Battery given by the North Carolina Employment Security Commission.** These tests

are a requirement of admission to any institution under the North Carolina Department of Community Colleges. There is an Employment Security Commission Office in Lenoir where these tests may be taken.

**5. Arrange for an interview with the Director of Student Personnel or other representative of the Caldwell Technical Institute.** The interview is a requirement for completing the application process. The applicant may arrange for the interview through his guidance counselor, or by call-in the Director of Student Personnel at 728-4323 in Lenoir or 396-3311 in Granite Falls. The interview may be arranged in the local school or in the temporary facilities of Caldwell Technical Institute.

**6.** A part-time student registering for one, two or three courses in a curriculum will not be required to take the GATB; however, should he decide to work toward the Degree or the Diploma, he must submit test scores, transcript and completed application before he registers for the fourth course in his curriculum.

### **Admission With Advanced Standing**

Students may be admitted with advanced standing by transfer from other technical institutes, colleges or universities. Credits transferred from another institution must be of "C" grade quality or higher, and parallel closely those offered by the Caldwell Technical Institute for the program in which the applicant desires advanced standing.

An official transcript must be submitted at least two weeks prior to registration day in order for advanced standing to be allowed.

Certain students may for reason of work experience or special high school preparation be allowed to take certain advanced courses instead of beginning at a lower level. These cases will be determined individually, and usually on the basis of a proficiency exam. Examples of this might be the applicant with typing and shorthand credits from high school. Elective courses will be chosen by the student to equal the number of credit hours omitted.

### **EXPENSES**

**(For one and two-year programs)**

**Tuition Deposit (Required)**

A student who wishes to be considered for admission to the

Institute will obtain from the Student Personnel Office an application blank. All application forms are to be accompanied by a Tuition Deposit of \$5.00 which is not refundable but will be deducted from the Tuition fee. This will become effective for September, 1968, applications.

### **Tuition**

Full-time students will pay tuition of \$32.00 per quarter. This will be due on the registration date for each quarter. Part-time students will pay tuition fees of \$2.50 for each credit hour of work taken. Students whose legal residence is outside of the State of North Carolina will pay registration and tuition fees the same as residents.

### **Books and Supplies**

A student is required to buy the necessary textbooks and supplies prescribed in the curriculum area he is entering. These vary widely according to curriculum.

### **Other Fees**

All students are urged to carry the group insurance available at the Institute for \$2.50 per year.

Students in the Cosmetology curriculum may be required to purchase their uniforms.

An activity fee of \$3.00 per quarter will be charged all students registered for full time curriculum programs.

Students may purchase year books if they desire.

A nominal fee is charged for a cap and gown at graduation.

### **Refunds**

Tuition refunds for full-time students are made only when a student withdraws from the Technical Institute for unavoidable reasons. In such cases, \$20.00 may be refunded if withdrawal is completed within 10 calendar days from the beginning of the quarter. No refunds can be made after this time.

## **ACADEMIC STANDING**

### **Grading System**

Official grades are issued for each student at the end of each quarter. Students who lack passing averages at mid-quarter will

be notified of this fact and should schedule a conference with the instructor and/or Director of Student Personnel.

Students enrolled in curriculum program courses will be graded by the letter-grade system shown below, and assigned a grade point equivalent in quality points for each quarter scheduled.

Numerical Grade	Grade	Grade Point Equivalent
93-100	A—Excellent	4 quality points each quarter hour
85- 92	B—Good	3 quality points each quarter hour
77- 84	C—Average	2 quality points each quarter hour
70- 76	D—Below Average	1 quality point each quarter hour
Below 70	F—Unsatisfactory	0 quality points each quarter hour

Inc.—Indicates failure to complete certain course requirements because of extenuating circumstances. All incompletes must be removed before the end of the succeeding term or the grade becomes an automatic “F”.

WP—Student dropped the course, but had a passing grade average at the point of withdrawal.

WF—Student dropped the course, and had a failing grade average at the point of withdrawal.

## Courses Repeated for Credit

When a course is repeated, the second grade is recorded as the final grade for the course and all grades are counted in determining the student's grade point average.

## Auditing

A student who audits a course, pays the regular registration and tuition fees. Auditors do not take tests, examinations, or receive grades or credit.

## Withdrawals

Students who withdraw from the Institute during any quarter must first consult with the Director of Student Personnel. This protects the student's scholastic record, his right to re-enroll, and his right to transfer to another technical institute.

A student may withdraw from any course prior to taking the final examination and receive a W.F. or W.P. with no bearing on his G.P.A. There is no limit to the number of times a student may withdraw from a particular course.

## **Schedule Changes**

Change of schedule after registration has been completed will be made only with permission of the Director of Student Personnel.

## **Academic Probation**

Students failing to maintain a 2.0 overall grade point equivalent average will be considered on academic probation, and may be required to modify his regular course load. A student may be asked to withdraw from a regular curriculum program if his grade point average drops below 1.0.

## **Requirements for Graduation**

A student is eligible for graduation when he has fulfilled the following requirements:

1. He has satisfactorily completed all the requirements of the curriculum in which he is enrolled.
2. He has sufficient quality points for an overall average of 2.0.
3. He has taken care of all financial obligations to the Caldwell Technical Institute.

## **Honors**

A graduating student who has earned an overall quality point average of 3.0 or better during his work at the Caldwell Technical Institute will receive his diploma or degree "With Honors."

## **Contact Hours**

The contract hours shown in the catalog are minimal. It is a policy of this institution to permit students to enroll in additional subjects and laboratory work beyond those shown in the catalog in order to broaden their training.

When in any quarter the total weekly contact hours listed are fewer than twenty-five hours in a technical curriculum and fewer than thirty hours in a vocational trade curriculum, a student may enroll on request and with the approval of the Director of Student Personnel for additional instructional hours to make up twenty-five hours per week in a technical curriculum or sufficient hours of attendance to make up thirty hours per week in a vocational trade curriculum.

## **STUDENT PERSONNEL ACTIVITIES AND SERVICES**

### **Counseling**

Opportunity for counseling services is made available to every student enrolled in the Caldwell Technical Institute. Counseling services are available for the discussion of personal problems affecting the satisfactory progress of the student in his chosen curriculum, for the discussion of his educational progress and for the discussion of work or study habits.

Each students is also assigned a faculty advisor to whom he may go for help.

## **FINANCIAL AID PROGRAM**

### **Scholarships**

A limited number of scholarships are available at present; however, more scholarships are expected in the near future. Students desiring such aid should make this known when filing an admission application. After initial payment and upon evidence of satisfactory performance by the recipient, the scholarship is payable in amounts prorated to each quarter of the school year. Scholarships available as of the printing of this publication are:

#### **Claude F. Seila Scholarship**

Awarded each year to one student taking a full time curriculum. This scholarship, given by the Lenoir Woman's Club, will award \$175.00 to the recipient.

#### **Anna Hasburg Mills Memorial Nursing Scholarship**

Awarded each year to one student taking the Practical Nursing curriculum. This is a full scholarship covering all tuition, fees, and textbooks in the program. This \$1,000.00 memorial scholarship fund was given by Mrs. Grace Mills Love.

#### **Lenoir Kiwanis Club Scholarship**

Awards granted to students in the form of tuition grants, according to need on a quarterly basis. This \$300.00 scholarship fund was established by the Lenoir Kiwanis Club on December 27, 1966.

## **Half Century Home Demonstration Club Scholarship**

A \$150.000 scholarship to be awarded to any deserving student.

### **Short Term Loans**

A revolving loan fund was established in 1966 by Caldwell Technical Institute for the benefit of students who, at the time of registration, do not have all the necessary money to pay tuition, fees, and purchase books and supplies. Students who indicate they lack sufficient funds and can assert that this is a temporary condition may borrow up to \$50.00. No interest is charged on these loans.

### **Long Term Loans**

North Carolina Funds for Vocational and Technical Students—The Caldwell Technical Institute is participating in the student loan program established by the State Board of Education making financial assistance available to those students enrolled full time in a vocational or technical education program. Qualified students may borrow up to \$300.00 in any year. Three and one-half per cent interest per year is charged on the unpaid balance beginning one year after the borrower ceases to pursue a full-time course of study at Caldwell Technical Institute. The total loan must be repaid in five years. Students may make application through the Director of Student Personnel.

Funds to support this loan program are limited, but the Institute is hopeful that additional monies will be contributed by other organizations for this worthwhile purpose.

The National Student Loan Fund Act makes provisions for students to borrow up to \$1,000 in any one year. Three per cent interest per year is charged on the unpaid balance beginning one year after the borrower ceases to pursue a course of study at an institution of higher learning. The total loan must be repaid in ten years. Students may make application through the financial aid counselor in the Student Personnel Office.

### **Part-Time Work Scholarships**

“Work-while-you-learn” jobs (work-study program) pay students a basic rate of \$1.25 an hour but can go up for highly specialized work. The average earnings per year is \$500.

Students may work up to 15 hours a week while attending an institution full time, and during the summer they may work full

time on a 40-hour week basis. Work may be either for the institute or for an approved off-campus non-profit agency.

## **STUDENT INSURANCE**

### **Accident Insurance**

For the protection of students an accident insurance policy is available on a voluntary basis for women and men. The policy provides coverage for twelve months on campus or off campus. All students are encouraged to purchase the protection.

### **Placement Services**

A placement services will be provided for graduates of the Caldwell Technical Institute. Personal-data sheets on each student will be prepared for prospective employers. Interviews will be arranged as opportunities arise.

### **Student Housing**

No dormitory facilities are available at Caldwell Technical Institute; however, the Institute staff will assist in locating suitable housing for those requesting assistance.

### **Veterans**

Qualified veterans who are admitted for instruction may be approved upon presentation of the Certificate of Eligibility issued by the Veterans Administration. Students will be accepted under Public Law 550 or Public Law 89-358. Veterans under the above mentioned laws are responsible directly to the school upon registration for payment of all costs. Veterans will further be responsible for furnishing the Director of Student Personnel with a monthly attendance report. No reimbursement cards can be authorized by the school until such reports are on file.

### **Refunds for Veterans**

The following refund policy will be applicable to persons enrolled under provision of Title 38, U.S. Code, as amended:

The institution has and maintains the following policy for the refund of the unused portion of tuition, fees, and other charges in the event the person fails to enter the course or withdraws or is discontinued therefrom at any time prior to completion:

The amount charged to the persons for tuition, fees, and other charges for a portion of the course will not exceed the approximate pro rata portion of the tuition, fees, and other charges that the length of the completed portion of the course bears to its total length.

### **Draft Deferment**

Draft Deferment forms are mailed to local Selective Service Boards upon request after registration.

### **Books and Supplies**

Students are responsible for securing their own textbooks and other supplies which may be required. Since these items may be used on the first day of classes, they should be purchased on the day of registration. The Institute bookstore is kept open extra hours during registration.

### **Library Facilities**

The library is in the process of collecting over 7,000 books and catalogued pamphlets and receives over 75 periodicals. New titles are being added continually. The open-shelf system is used; students are encouraged to browse and use the reading room as a quiet place to study.

### **Studio, Laboratory, and Shop Equipment**

Ample opportunity for students to make practical application of their classroom work is an inherent part of many programs offered at the Institute. Within the framework of regulations, which are always necessary when expensive equipment is involved, students have some of the best equipment available for their use.

### **Attendance Policy**

Students are expected to attend every meeting of every course in which they are enrolled. As all students are adults, some with many responsibilities, an occasional absence from class might be absolutely necessary; however, such absences in no way lessen the student's responsibility for meeting the requirements of the class.

In case of prolonged illness, a student should present a doctor's certificate for any absences beyond the third day (or from the beginning if a teacher requests it) if he wishes such absences to be excused.

Absences incurred by night students will be handled at the discretion of the teacher.

Because of certain state regulations concerning attendance in cosmetology and in practical nursing, instructors in these departments will set their own policies.

According to institute regulations, "A student must be dropped from the roll not later than the fifth consecutive unexcused absence, or earlier if notified by the proper institutional official."

**Student Conduct**

Institute students are considered to be mature individuals. Their conduct, both in and out of school, is expected to be that of any respectable adult in a public place. Under these circumstances, it is expected that the students will at all times consider they are living in a democratic situation, and that the reputation of the institution rests on their shoulders. Common courtesy and cooperation make the above suffice for a long list of rules and penalties.

**Fundamentals Learning Laboratory**

The purposes of the Fundamental Learning Laboratory are threefold: to provide necessary materials and facilities to help adults prepare for the high school equivalency examination, to help students and adults gain educational improvement of their own choosing, and to help students remedy academic deficiencies.

The only necessary materials an applicant need furnish are pencil and paper, and the only requirement is that he be at least eighteen years old. The following subjects are available in programmed form:

The lab schedule will be announced at the beginning of the school term.

SUBJECTS	SUBJECTS
<b>Reading and Language</b>	<b>Mathematics</b>
Reading instruction at all levels	Arithmetic
Practice, and drill in individual reading skills	Addition
Vocabulary development	Subtraction
Spelling	Multiplication
Punctuation	Division
Grammar	Fractions
Composition	Decimals
Business letter writing	Per Cents
<b>Social Studies</b>	Square Root
United States History	Probability
United States Geography	Algebra
The Constitution	Geometry
The Bill of Rights	Trigonometry
How a Bill Becomes a Law	<b>Sciences</b>
	General Science
	Biology
	Physics
	Chemistry
	Vectors



## *General Education Division*



## PROPOSED PROGRAM FOR ASSOCIATE IN GENERAL EDUCATION DEGREE

Thomas Jefferson stated: "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be." Since Jefferson's time our civilization has become increasingly democratic and complex. Knowledge in the broad fields of literature, the arts, philosophy, history and science has also expanded. Citizens in all walks of life must become increasingly aware not only of the complex workings and inter-relationships of our institutions but also of our cultural heritage and history.

As our industrial and societal needs have developed, the requirements in the various professions have forced the education of such persons to be drawn out over a longer period of time. Technical advances also have demanded more intensive training in this complex area of knowledge and skills. A large number of citizens, however, fall clearly into neither professional nor technical categories. These people constitute the majority of citizens whose occupational activities and interests demand a high degree of literacy and some special training but whose educational goals are neither professional nor highly technical. They are the managers of small independent businesses; the department managers of larger concerns; some employees of local, state and federal government; the housewives desiring to keep abreast of their husbands' expanding knowledge and interests; young women in general; and those of all ages who have a thirst for a wider and deeper insight into life and the workings of our society.

The program being considered by Caldwell Technical Institute is designed for the student who is interested in a broad two-year program of college-level general education. This program provides a basic core of course work in the following areas:

English and Literature	18 quarter hours
Fine Arts and Philosophy	15 quarter hours
Social Science	9 quarter hours
Science and Mathematics	17 quarter hours

This introduction into the broad fields of knowledge permits the student to find himself and clarify his life goals. With this

background he is able to intelligently choose additional course work in terms of his own interests and social needs. The program provides a wide choice of electives and permits the student to explore areas of interest uninhibited by specific professional or technical requirements. Beyond the basic general education, the student's program is flexible to the impulse and variety of human needs. He may explore courses in furniture construction, interior design, great books, marriage and the family, economics, American government, foreign languages, or something in arts and crafts.

The program is principally designed for students wanting only two years of higher education; however, many of the required and elective courses in the program are the equivalent of regular freshman and sophomore work.

When the student has completed basic general education requirements and accumulated additional satisfactory work to a total of 96 quarter hours, he will be granted an Associate in General Education Degree.

## ASSOCIATE IN GENERAL EDUCATION DEGREE

### Curriculum By Quarters

#### FRESHMAN YEAR

##### FIRST QUARTER

	Course Title	Class Hours	Quarter Hours Credit
English 101	College English	3	3
History 101	World Civilization	3	3
Science 101	Physical Science	3	3
Music 101	Music Appreciation	3	3
Elective		4	4
		<hr/> 16	<hr/> 16

##### SECOND QUARTER

	Course Title	Class Hours	Quarter Hours Credit
English 102	College English	3	3
History 102	World Civilization	3	3
Math 101	Modern Math	3	3
Art 101	Art Appreciation	3	3
Elective		4	4
		<hr/> 16	<hr/> 16

##### THIRD QUARTER

	Course Title	Class Hours	Quarter Hours Credit
English 103	English Masterpieces	3	3
History 103	World Civilization	3	3
Math 102	Introduction to Logic	3	3
Psychology 101	Introduction to Psychology	3	3
Elective		4	4
		<hr/> 16	<hr/> 16

## **SOPHOMORE YEAR**

### **FOURTH QUARTER**

	<b>Course Title</b>	<b>Class Hours</b>	<b>Quarter Hours Credit</b>
English 201	English Masterpieces	3	3
Biology 201	General Zoology	4	4
Electives (3)		9	9
		<hr/> 16	<hr/> 16

### **FIFTH QUARTER**

	<b>Course Title</b>	<b>Class Hours</b>	<b>Quarter Hours Credit</b>
English 202	English Masterpieces	3	3
Biology 202	General Botany	4	4
Philosophy 202	Introduction to Philosophy	3	3
Electives (2)		6	6
		<hr/> 16	<hr/> 16

### **SIXTH QUARTER**

	<b>Course Title</b>	<b>Class Hours</b>	<b>Quarter Hours Credit</b>
English 203	Creative Writing	3	3
Philosophy 203	Contemporary Issues	3	3
Electives (3)		10	10
		<hr/> 16	<hr/> 16

CURRICULUM INCLUDES 59 QUARTER HOURS OF GENERAL EDUCATION COURSES AND 37 HOURS OF ELECTIVE COURSES.

## **GENERAL EDUCATION DEGREE COURSE DESCRIPTIONS**

### **ENG 101 English 3 hours**

A brief history of the English language and review of grammar with particular emphasis on composition and expository writing.

### **ENG 102 English 3 hours**

A continuation of ENG 101 with special emphasis on reading, expository writing and speaking, with an introduction to poetry and the short story.

### **ENG 103 English Masterpieces in the Social Sciences 3 hours**

A continuation of ENG 101 and ENG 102 introducing the novel and with increased emphasis on writing and speaking on topics related to contemporary social problems. (Co-requisite with HIS 103)

### **ENG 201 English Masterpieces in the Natural Sciences 3 hours**

A continuation, introducing the essay and with emphasis on writing and speaking on topics related to man in his biological and physical environment. (Co-requisite with BIO 201)

### **ENG 202 English Masterpieces in the Humanities 3 hours**

A continuation, drawing from all literary forms with emphasis on expository writing and speaking, on man and philosophy. (Co-rerequisite with PHI 202)

**ENG 203 Creative Writing** 3 hours  
Creative writing laboratory. Emphasis on imaginative writing with some attention to essays, short stories, and poetry.

**NSC 101 Physical Science** 3 hours  
A study of facts, principles, theories and basic concepts from the areas of astronomy, geology and climatology. Special emphasis will be given to evaluation of landscapes, effects of glaciers, streams, wind, weather, and the geological timetable.

**MTH 101 Modern Mathematics** 3 hours  
An introduction to mathematical concepts necessary for effective citizenship. The course includes sets, the development of number systems, an introduction to probability, algebra and statistics.

**MTH 102 Introduction to Logic** 3 hours  
Emphasis on both inductive and deductive logic with particular attention to the bases of scientific evidence, probability theory, hypothetical and categorical syllogisms, causation and common fallacies.

**BIO 201 General Zoology** 4 hours  
A comprehensive study of the animal kingdom, with special emphasis on the morphology, anatomy, physiology, genetics and ecological relationships. (Co-requisite with ENG 201)

**BIO 202 General Botany** 4 hours  
A comprehensive study of the plant kingdom with special emphasis on morphology, anatomy, physiology, taxonomy and ecology.

**MUS 101 Music Appreciation** 3 hours  
Designed to give a basic orientation to music with emphasis on simple form and analysis, instrumentation, aesthetics, masterpieces and other significant works are demonstrated.

**ART 101 Art Appreciation** 3 hours  
An introduction to fundamental elements and principles of creative art expression emphasizing composition, design, shape, value, styles, and movements.

**PSY 101 Introduction to Psychology** 3 hours  
Introductory survey of the field of psychology wherein the student becomes better acquainted with a human being as a biological-social organism. Topics covered include history of psychological development, the scientific method in psychology, theory of statistical concepts, intelligence, motivation, emotions and learning.

**PHI 202 Introduction to Philosophy** 3 hours  
An introduction to philosophic world frames emphasizing viewpoint and value systems. (Co-requisite with ENG 202)

**PHI 203 Contemporary Issues** 3 hours  
A culminating interdisciplinary course dealing with the basic economic, social, scientific and moral issues confronting human society.

**HIS 101 World Civilization** 3 hours  
A survey of the cultural beginnings of Eastern and Western civilizations, dealing with migrations, cultural diffusion, and the development of governmental and ethical structures through the fall of the Roman Empire.

**HIS 102 World Civilization**

**3 hours**

A continuation of HIS 101 from the Middle Ages, through the Renaissance, the Voyages of Discovery, Colonization, the Reformation, and the Age of Enlightenment.

**HIS 103 World Civilization**

**3 hours**

A continuation beginning with the Industrial Revolution, the impact of industrial imperialism, the American and French Revolutions, the rise of political democracy and modern nationalism to the present. (Co-requisite with ENG 103)

## *Technical Programs*



## **TECHNICAL CURRICULA**

The two-year technical curricular program is designed to prepare enrollees for technician-level occupations. More emphasis is given to theory than in vocational courses. Also, roughly one-half of the course requirements are in general education and the sciences underlying the particular occupational area.

## **ADMISSION REQUIREMENTS TECHNICAL PROGRAM**

### **MINIMUM ADMISSION REQUIREMENTS**

Requirements for admission of a candidate to the regular two-year technology program include the following qualifications. The candidate:

1. Must be a high school graduate or have a State approved equivalent education.
2. Must have high school credit for two units of mathematics, one of which is in algebra and the other in plane geometry or an equivalent in modern mathematics. Competence may be determined by appropriate tests. Those who fail to meet the accepted standards for technical mathematics will be required to complete successfully a prerequisite mathematics course to remove the deficiency. A student with deficiencies may be admitted only when there is strong indication of probable success.
3. Should have completed one unit of physical science with laboratory.
4. Must submit the transcripts of high school and post-high school education.
5. Must demonstrate aptitude for technician training as determined by standard tests. These tests will aid in student selection, placement, and guidance. Institution guidance and counseling will be available to the student throughout his education, not just at the time of his enrollment.

6. Must be in acceptable condition of physical and mental health. Medical examination may be required at the discretion of the administration.
7. Must have an interview with a designated representative for discussing enrollment plans and lifetime career goals.

## **CONTACT HOURS AND CREDIT HOURS**

These curriculums are to be offered on the basis of an average load of twenty-five contact hours per five-day week, eleven weeks per quarter for six quarters. Students enrolled in a part-time program will be scheduled, based on class needs, to accomplish this average load, but over a longer period of time.

Quarterly credit hours are awarded to students on the following arrangement:

Credit of one quarter hour for each hour of class work per week for eleven weeks. The average hour of class will require two hours of assigned homework for the average student.

Credit of one quarter hour for each two hours of laboratory work per week for eleven weeks. One hour of assigned homework will accompany an average laboratory period of two hours.

Credit of one quarter hour for each three hours of manipulative laboratory for eleven weeks. No outside work will ordinarily be assigned to accompany this shop period. Manipulative laboratories will be indicated by an asterisk.

The following definitions will explain the foregoing terms:

“Class work” is lecture and other classroom instruction.

“Laboratory” involves demonstration by instructor, experimentation and practice by students.

“Manipulative laboratory” involves development of manual skills and job proficiency.

## **ADMISSION REQUIREMENTS BUSINESS TECHNOLOGY PROGRAMS**

### **MINIMUM ADMISSION REQUIREMENTS**

Requirements for admission of a candidate to the regular two year Associate of Applied Science Degree program include the following qualifications. The candidate:

1. Must be a high school graduate or have a State approved equivalent education.

2. Must submit the transcript of high school and post-high school education.
3. Must demonstrate aptitude for business training as determined by standardized tests. These tests will aid in student selection, placement, and guidance. Institution guidance and counseling will be available to the student throughout his education, not just at the time of his enrollment.
4. Must be in acceptable condition of physical and mental health. Medical examination may be required at the discretion of the administration.
5. Must have an interview with a designated representative for discussing enrollment plans and lifetime career goals.

## **ELECTIVES**

These programs have provisions for electives. Students with skills in typing and shorthand may be exempted from taking T-BUS 102 Typewriting, T-BUS 103 Typewriting, and T-BUS 106 Shorthand. In this case the student is to elect a course of equivalent or more hours from any business education curriculum of the associate degree level.

# **BUSINESS ADMINISTRATION**

## **INTRODUCTION**

### **PURPOSE OF CURRICULUM**

In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.

3. Knowledge in specific elements of accounting, finance, and business law.
4. Understanding and skill in effective communication for business.
5. Knowledge of human relations as they apply to successful business operations in a rapidly expanding economy.

### Job Description

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation; and communications.

## BUSINESS ADMINISTRATION

### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>				
T-ENG 101	Grammar	3	0	3
T-BUS 102	Typewriting (or Elective)	2	3*	3
T-MAT 110	Business Mathematics	5	0	5
T-BUS 101	Introduction to Business	5	0	5
T-ECO 102	Economics	3	0	3
		18	3	19
<b>SECOND QUARTER</b>				
T-ENG 102	Composition	3	0	3
T-BUS 120	Accounting	5	2	6
T-ECO 104	Economics	3	0	3
T-BUS 115	Business Law	3	0	3
T-BUS 123	Business Finance	3	0	3
		17	2	18
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing	3	0	3
T-BUS 124	Business Finance	3	0	3
T-BUS 110	Office Machines	5	2	6
T-BUS 121	Accounting	5	2	6
T-BUS 116	Business Law	3	0	3
		16	4	18

\*"Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communication	3	0	3
T-BUS 232	Introduction to Data			
T-EDP 104	Processing System	3	2	4
	Marketing	5	0	5
T-BUS 239	Elective	3	0	3
		<hr/>	<hr/>	<hr/>
		17	2	18
<b>FIFTH QUARTER</b>				
T-ENG 206	Business Communication	3	0	3
	Social Science Elective	3	0	3
T-BUS 243	Advertising	3	2	4
T-BUS 235	Business Management	3	0	3
	Elective	3	0	3
		<hr/>	<hr/>	<hr/>
		15	2	16
<b>SIXTH QUARTER</b>				
	Social Science Elective	3	0	3
T-BUS 229	Taxes	3	2	4
T-BUS 272	Principles of Supervision	3	0	3
T-BUS 271	Office Management	3	0	3
	Elective	6	0	6
		<hr/>	<hr/>	<hr/>
		18	2	19
Total Quarter Hours in Courses				96
Electives (Min.)				12
				<hr/>
				108

## DRAFTING & DESIGN—MECHANICAL

### PURPOSE OF CURRICULUM

The curriculum guide was prepared for the purpose of outlining a training program for students of mechanical drafting and design technology. There are certain identifiable duties which are common to all technicians of this general classification and which comprise the basic areas of technical knowledge they need. This curriculum has been designed for training persons in the accepted performance of these basic duties that will be assigned, and to enable the individual students to become proficient in a short time after he becomes employed in the industry.

Courses in general education have been included to give a student the assurance and understanding that come with education upon a broad base. The technician associates with many levels of thought and expression—administrative personnel, scientists, engineers, skilled workmen—and must be able to communicate effectively with all levels. Courses containing essential

information from related subject areas, such as mathematics, physics, and mechanics have been included in order to provide the student a better academic base for his training. Emphasis is placed upon ability to think and plan, as well as drafting procedures and techniques.

### JOB DESCRIPTION

Mechanical drafting and design technicians are concerned with the preparation of drawings for design proposals, for experimental models and items for production use.

These technicians perform many aspects of drafting in a specialized field, such as the developing of the drawing of a section, sub-assembly or major component. Investigating design factors and availability of material and equipment, production methods and facilities are frequent assignments. They assist in the design of units and controls from specifications by utilizing drawings of existing units and reports on functional performance. They may draw components in industrial fields based on engineers' original design concepts or specific ideas. Also, they may be assigned as coordinators for the execution of related work of other design, production, tooling, material and planning groups. Technicians with experience in this classification may often supervise the preparation of working drawings.

These technicians are employed in many types of manufacturing, fabrication, research development and service industries. Substantial numbers also are employed in communications, transportation, public utilities, consulting engineering firms, and federal, state, and local governments.

### DRAFTING & DESIGN—MECHANICAL

Suggested Curriculum by Quarters				
Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
FIRST QUARTER				
T-ENG 101	Grammar	3	0	3
T-MAT 101	Technical Mathematics	5	0	5
T-PHY 101	Physics: Properties of Matter	3	2	4
T-DFT 101	Technical Drafting	0	6*	2
T-MEC 101	Machine Processes	0	6*	2
		11	14	16
SECOND QUARTER				
T-ENG 102	Composition	3	0	3
T-MAT 102	Technical Mathematics	5	0	5
T-PHY 102	Physics: Work, Energy, Power	3	2	4
T-DFT 102	Technical Drafting	0	6*	2
T-MEC 102	Machine Processes	0	6*	2
		11	14	16

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing	3	0	3
T-MAT 103	Technical Mathematics	5	0	5
T-PHY 103	Physics: Electricity	3	2	4
T-PHY 106	Applied Mechanics	5	0	5
T-DFT 103	Technical Drafting	0	6*	2
		16	8	19
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communication	3	0	3
T-DFT 201	Technical Drafting	2	6*	4
T-DFT 204	Descriptive Geometry	2	4	4
T-MEC 205	Strength of Materials	3	2	4
T-MEC 210	Physical Metallurgy	3	3*	4
		13	15	19
<b>FIFTH QUARTER</b>				
	Social Science Elective	3	0	3
T-DFT 205	Design Drafting I	2	6*	4
T-DFT 211	Mechanisms	3	2	4
T-MEC 211	Physical Metallurgy Elective	3	3*	4 4
		11	11	19
<b>SIXTH QUARTER</b>				
	Social Science Elective	3	0	3
T-DFT 206	Design Drafting II	2	6*	4
T-MEC 235	Hydraulics & Pneumatics	3	3*	4
	Elective	—	—	4
	Elective	—	—	4
		8	9	19
Total Quarter Hours in Courses				96
Minimum Electives				12
Total				108

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

## ELECTRONIC DATA PROCESSING TECHNOLOGY—BUSINESS

### PURPOSE OF CURRICULUM

The processing of data by electronic equipment has created vast changes in business and industry. Nowhere are these changes more apparent than in the occupations associated with the handling of business information. Much of the routine and time-consuming work of obtaining, compiling and reporting the

information necessary for a business to operate can now be adapted to machine processing.

This curriculum is designed to give the student (1) an understanding of the principles of business operation, (2) experience with techniques and handling business data, and (3) functional competence in the application of data processing systems, and experience in computer programming of business records and accounts, inventory, sales, and income and expenditures essential to business and to management decisions.

Emphasis is upon business data processing and use of machines in solving business problems.

## JOB DESCRIPTION

The business data processing specialist applies currently available programming techniques to a defined problem with minimum supervision. He analyzes and defines systems requirements to develop a program for electronic data processing; conducts detailed analyses of systems requirements, and develops all levels of block diagrams and logical flow charts. Translates program details into coded instructions; establishes test data; tests, refines, and revises program and documents the procedures. Ascertains if other combinations of instructions would achieve greater flexibility, better machine utilization, or more dependable results. He may prepare a complete set of operating instructions for use by a console operator; on occasion, operates the console in processing program.

## ELECTRONIC DATA PROCESSING CURRICULUM

### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>				
T-ENG 101	Grammar	3	0	3
T-MAT 101	Technical Mathematics	5	0	5
T-MAT 121	Numbering System and Boolean Algebra	4	0	4
T-EDP 101	Functional Wiring Principles	2	3	3
T-EDP 104	Introduction to Data Processing Systems	3	2	4
		<hr/> 17	<hr/> 5	<hr/> 19
<b>SECOND QUARTER</b>				
T-ENG 102	Composition	3	0	3
T-MAT 102	Technical Mathematics	5	0	5
T-EDP 106	Business Programming	2	4	4
T-EDP 102	Functional Wiring Principles	2	3	3
T-BUS 120	Accounting	5	2	6
		<hr/> 17	<hr/> 9	<hr/> 21

Course Title		Hours	Per Week	Quarter
		Class	Lab.	Hours Credit
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing	3	0	3
T-EDP 108	Scientific Programming	2	4	4
T-BUS 115	Business Law	3	0	3
T-BUS 235	Business Management	3	0	3
T-MAT 214	Statistics	5	0	5
		16	4	18

## EXECUTIVE SECRETARY

### PURPOSE OF CURRICULUM

The demand for better qualified secretaries in our ever-expanding business world is becoming more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business world, and to enable persons to become proficient soon after accepting employment in the business office.

The Executive Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the business world. The special training in secretarial subjects is supplemental by related courses in mathematics, accounting, business law, and personality development.

### JOB DESCRIPTION

The graduate of the Executive Secretary Curriculum should have a knowledge of business terminology, skill in dictation, and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses such as insurance companies, banks, marketing institutions, and financial firms.

# SECRETARY - EXECUTIVE

## Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>				
T-ENG 101	Grammar	3	0	3
T-BUS 102	Typewriting (Or Elective)	2	3*	3
T-MAT 110	Business Mathematics	5	0	5
T-BUS 101	Introduction to Business	5	0	5
T-BUS 106	Shorthand (Or Elective)	3	2	4
		18	5	20
<b>SECOND QUARTER</b>				
T-ENG 102	Composition	3	0	3
T-BUS 103	Typewriting (Or Elective)	2	3*	3
T-BUS 107	Shorthand	3	2	4
T-BUS 120	Accounting	5	2	6
T-BUS 115	Business Law	3	0	3
		16	7	19
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing	3	0	3
T-BUS 104	Typewriting	2	3*	3
T-BUS 108	Shorthand	3	2	4
T-BUS 110	Office Machines	2	2	3
T-BUS 112	Filing	3	0	3
		13	7	16
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communication	3	0	3
T-BUS 206E	Dictation and Transcription (Executive)	3	2	4
T-BUS 205	Advanced Typewriting	2	3*	3
T-BUS 211	Office Machines	2	2	3
T-EDP 104	Introduction to Data Processing Systems	3	2	4
		13	9	17
<b>FIFTH QUARTER</b>				
T-ENG 206	Business Communication	3	0	3
T-BUS 207E	Dictation and Transcription (Executive)	3	2	4
T-BUS 214	Secretarial Procedures	3	2	4
	General Drafting Elective	3	0	3
	Elective	6	0	6
		18	4	20

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>SIXTH QUARTER</b>				
T-BUS 208E	Social Science Elective	3	0	3
	Dictation and Transcription (Executive)	3	2	4
T-BUS 271	Office Management	3	0	3
	Elective	6	0	6
		<hr/> 15	<hr/> 2	<hr/> 16
Total Quarter Hours in Courses				96
Electives (Min.)				<hr/> 12
				<hr/> 108

## LIBRARY TECHNICIAN

### PURPOSE OF CURRICULUM

There is a growing need for men and women to assist the Librarian by assuming the many technical and clerical responsibilities which are essential to the operation of the modern library. People filling jobs of this nature may be called aides, assistants, or technicians. A Library Technician is a person working at the sub-professional level under a professional librarian who is trained to do many of the non-professional tasks which must be handled by the librarian without such assistance.

This program is designed to prepare persons for technical work in libraries—public school, hospital, government, and industry. The Curriculum provides a background of general education, coupled with certain basic library skills to prepare interested students to enter library work above the minimum clerk status; and introduces the variety of library work into which a trained person may work, suiting abilities to the particular job. This enables the student to gain training in skills at an undergraduate level, making possible entry into library work, without involving the long “in service” training now needed for clerks.

### JOB DESCRIPTION

The graduate of the Library Technician curriculum may enter a variety of career opportunities. Graduates are qualified for general library duties, assisting in ordering, processing and cataloging materials; binding related pamphlets and periodicals; mending torn materials; and keeping the vertical file up-to-date.

A Library Technician receives task assignments from, and is

directly responsible to, the professional librarian. These task assignments may include one or more of the following: compiles records; sorts and shelves books, issues and receives library materials; records identifying data and due date on cards by hand or using photographic equipment to issue books to patrons; inspects returned books for damage, verifies due-date, and computes and receives overdue fines; sorts books, publications, and other items according to classification code and returns them to shelves, files, or other designated storage area; files cards in catalog drawers according to system; repairs books; and types material cards or issue cards and duty schedules.

### LIBRARY TECHNICIAN

#### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>				
T-ENG 101	Grammar	3	0	3
T-MAT 110	Business Mathematics	5	0	5
T-BUS 102	Typewriting (Or Elective)	2	3*	3
T-LIB 101	Introduction to Library Services	3	2	4
T-PHY 105	Survey of Physical Science	3	0	3
		16	5	18
<b>SECOND QUARTER</b>				
T-ENG 102	Composition	3	0	3
T-BUS 103	Typewriting	2	3*	3
T-BUS 120	Accounting	5	2	6
T-LIB 102	Book Selection Tools and Other Procedure	3	2	4
T-PHY 106	Survey of Physical Science	3	0	3
		16	7	19
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing	3	0	3
T-BUS 104	Typewriting	2	3*	3
T-BUS 110	Office Machines	2	2	3
T-LIB 103	Libray Reference	3	2	4
T-SSC 101	Western Civilization	3	0	3
T-	Elective	3	0	3
		16	7	19
<b>FOURTH QUARTER</b>				
T-ENG 104	Oral Communication	3	0	3
T-EDP 104	Introduction to Data Processing	3	2	4
T-LIB 201	Introduction to Classification & Cataloging	3	2	4
T-SSC 101	Western Civilization	3	0	3
T-SSC 201	Social Science	3	0	3
		15	4	17

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
FIFTH QUARTER				
T-SSC 202	Social Science	3	0	3
T-LIB 202	Library Circulation Routines	3	0	3
T-BUS 213	Office Practice	3	2	4
T-ENG 201	American Literature	3	0	3
T-LIB 203	Library Practice	0	6	3
		<hr/> 12	<hr/> 8	<hr/> 16
SIXTH QUARTER				
T-AUDV 101	Audio Visual Materials	2	3	3
T-LIB 204	Library Practice	0	6	3
T-ENG 202	American Literature	3	0	3
T-	Electives	6	0	6
		<hr/> 11	<hr/> 9	<hr/> 15
	Structural Hours			95
	Electives			9
	— Total			<hr/> 104

\* Elective courses must be selected from the associate degree curriculum.  
Local institutions may add work experience to this curriculum.

## MANUFACTURING ENGINEERING TECHNOLOGY

### PURPOSE OF CURRICULUM

A primary objective of this program is the training of personnel to assist the engineer or small industry in planning, tooling, operating, servicing, and supervising manufacturing operations. Practically every branch of manufacturing and much research and design make use of the mechanical principles presented in this curriculum. With the increasing importance of automated production, quality control and production scheduling techniques, the position of the technician in this field has become of primary importance. This curriculum provides basic background of mechanical and related theory with specific skills in the use of manufacturing and testing equipment. The students are given experience in operating and servicing machines accompanied by general education and management courses.

### JOB DESCRIPTION

A graduate of this program may qualify for an entry position in one of several manufacturing functions. Methods analysis, production scheduling, quality control, materials testing, plant layout, time study, machine tooling, maintenance, equipment

and instrument work are typical of situations where the graduate may be able to function with a minimum of on-the-job training.

## MANUFACTURING ENGINEERING TECHNICIAN

### Suggested Curriculum by Quarters

Course Title		Hours	Per Week	Quarter
		Class	Lab.	Hours Credit
FIRST QUARTER				
T-ENG 101	Grammar	3	0	3
T-MAT 101	Technical Mathematics	5	0	5
T-PHY 101	Physics: Properties of Matter	3	2	4
T-DFT 101	Technical Drafting	0	6*	2
T-MEC 101	Machine Processes	0	6*	2
		<hr/>	<hr/>	<hr/>
		11	14	16
SECOND QUARTER				
T-ENG 102	Composition	3	0	3
T-MAT 102	Technical Mathematics	5	0	5
T-PHY 102	Physics:Work, Energy, Power	3	2	4
T-DFT 102	Technical Drafting	0	6*	2
T-MEC 102	Machine Processes	0	6*	2
		<hr/>	<hr/>	<hr/>
		11	14	16
THIRD QUARTER				
T-ENG 103	Report Writing	3	0	3
T-MAT 103	Technical Mathematics	5	0	5
T-PHY 103	Physics: Electricity	3	2	4
T-PHY 106	Applied Mechanics	5	0	5
T-MEC 103	Machine Processes	0	6*	2
		<hr/>	<hr/>	<hr/>
		16	8	19
FOURTH QUARTER				
T-ENG 204	Oral Communication	3	0	3
T-MEC 205	Strength of Materials	3	2	4
T-MEC 210	Physical Metallurgy	3	3*	4
T-MEC 213	Production Planning	3	3*	4
T-MEC 201	Machine Processes	2	6*	4
		<hr/>	<hr/>	<hr/>
		14	14	19
FIFTH QUARTER				
	Social Science Elective	3	0	3
T-MEC 211	Physical Metallurgy	3	3*	4
T-DFT 211	Mechanisms	3	2	4
T-ISC 202	Quality Control	3	2	4
	Elective			4
		<hr/>	<hr/>	<hr/>
		12	7	19

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>SIXTH QUARTER</b>				
	Social Science Elective	3	0	3
T-ISC 203	Motion Study	3	2	4
T-MEC 235	Hydraulics and Pneumatics	3	3*	4
	Elective			4
	Elective			4
		<hr/>	<hr/>	<hr/>
		9	5	19
Total Quarter Hours in Courses				96
Electives (Min.)				12
				<hr/>
Total				108

## MEDICAL SECRETARY

### PURPOSE OF CURRICULUM

The demand for better-qualified medical secretaries in our ever-expanding medical profession is becoming more acute. The purpose of this curriculum is to outline a training program that will provide specialized training in the accepted procedures required by the medical profession, and to enable persons to become proficient soon after accepting employment in the medical and health occupations.

The Medical Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the medical profession. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development. During the last quarter, the student engages in six hours of office application each week in a hospital or physician's office.

### JOB DESCRIPTION

The graduate of the Medical Secretary Curriculum should have a knowledge of medical terminology, skill in dictation, and accurate transcription of medical records, reports, and letters. The duties of a medical secretary may consist of: taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing, and scheduling appointments. The graduate may enter a secretarial position in a variety of offices such as physicians', private and public hospitals, Federal and State health programs, and the drug and pharmaceutical industry.

# MEDICAL SECRETARY

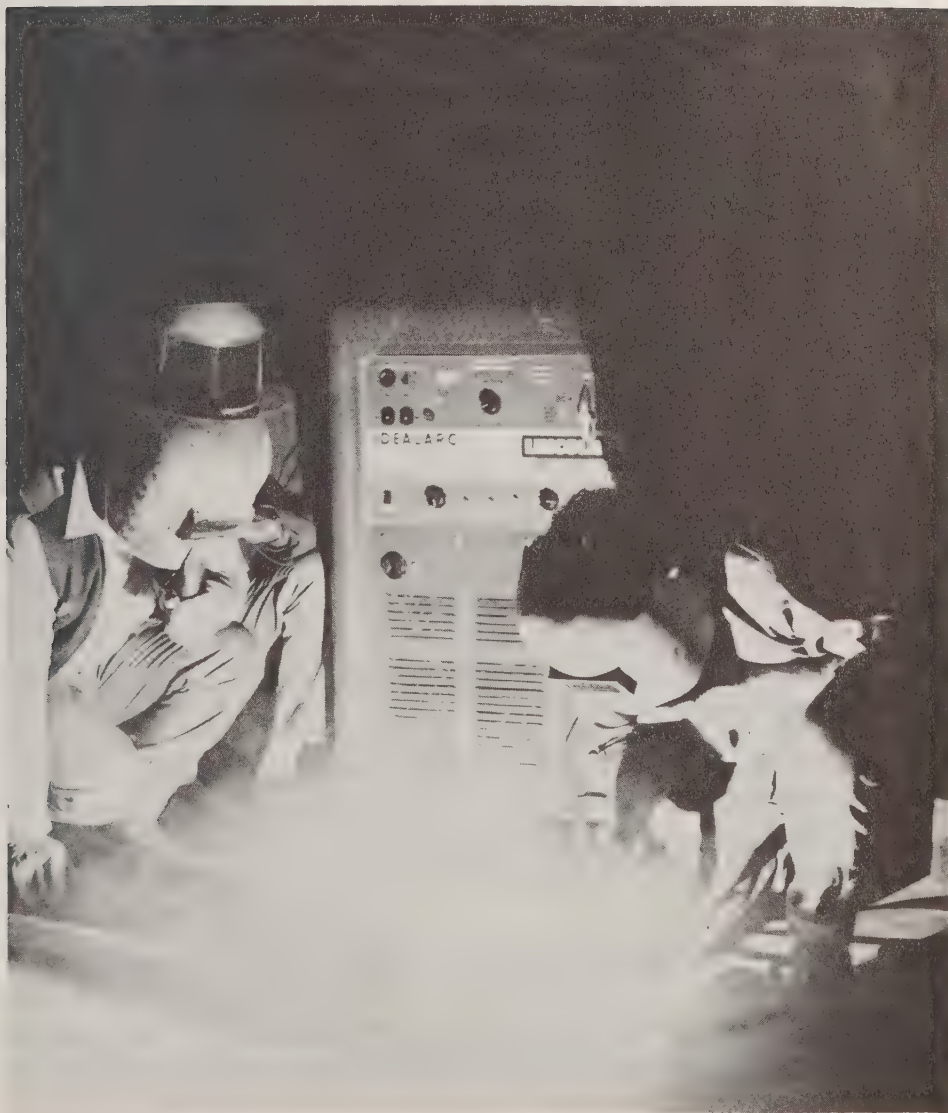
## Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>				
T-ENG 101	Grammar	3	0	3
T-BUS 102	Typewriting (Or Elective)	2	3*	3
T-MAT 110	Business Mathematics	5	0	5
T-BUS 101	Introduction to Business	5	0	5
T-BUS 106	Shorthand (Or Elective)	3	2	4
		18	5	20
<b>SECOND QUARTER</b>				
T-ENG 102	Composition	3	0	3
T-BUS 103	Typewriting (Or Elective)	2	3*	3
T-BUS 107	Shorthand	3	2	4
T-BUS 120	Accounting	5	2	6
T-BUS 115	Business Law	3	0	3
		16	7	19
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing	3	0	3
T-BUS 104	Typewriting	2	3*	3
T-BUS 108	Shorthand	3	2	4
T-BUS 110	Office Machines	2	2	3
T-BUS 112	Filing	3	0	3
T-BUS 183M	Terminology and Vocabulary (Medical)	3	0	3
		16	7	19
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communication	3	0	3
T-BUS 206M	Dictation and Transcription (Medical)	3	2	4
T-BUS 205	Advanced Typewriting	2	3*	3
T-BUS 211	Office Machines	2	2	3
T-EDP 104	Introduction to Data Processing Systems	3	2	4
T-BUS 284M	Terminology and Vocabulary (Medical)	3	0	3
		16	9	20
<b>FIFTH QUARTER</b>				
T-ENG 206	Business Communication	3	0	3
T-BUS 207M	Dictation and Transcription (Medical)	3	2	4
T-BUS 214	Secretarial Procedures	3	2	4
	General Drafting Elective	3	0	3
	Elective	3	0	3
		15	4	17

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
<b>SIXTH QUARTER</b>				
T-BUS 208M	Social Science Elective	3	0	3
	Dictation and Transcription (Medical)	3	2	4
T-BUS 271	Office Management	3	0	3
	Elective	3	0	3
		<hr/> 12	<hr/> 2	<hr/> 13

## *Vocational Programs*



## **ADMISSION REQUIREMENTS VOCATIONAL PROGRAMS**

The following are minimum admission requirements to the regular one-year trade preparatory curriculums and vocational programs:

### **MINIMUM ADMISSION REQUIREMENTS**

A candidate for admission to the regular trade-vocational training program must meet the following qualifications:

1. Must be at least 18 years of age and have the ability to enter into or make advancement in the area in which enrolled.
2. Must have satisfactory completed a minimum of eight (8) units of accredited secondary school work. Those who have not successfully completed eight (8) units of such work will be required to take other standard and/or local institution tests.
3. Must demonstrate aptitude for trade-vocational training as determined by standard and/or local institution tests to insure ability to meet job requirements in the desired trade.
4. Must have one (1) unit of secondary school algebra or an equivalent in modern mathematics. Those who have deficiencies will be required to remove the deficiency before completing their training.  
Provisional admittance may be granted at the discretion of the administration.
5. Must have a personal interview with designated school representative.
6. Must be in acceptable condition of physical and mental health to meet qualifications for a given occupation.

### **CONTACT HOURS AND CREDIT HOURS**

These curriculums are to be offered on the basis of an average load of twenty-five contact hours per five-day week, eleven weeks

per quarter, for four quarters. Students enrolled in a part-time program will be scheduled, based on class needs, to accomplish this average load, but over a longer period of time.

Quarterly credit hours are awarded to students on the following arrangement:

Credit of one quarter hour for each hour of class work per week for eleven weeks. The average hour of class will require two hours of assigned homework, for an average student.

Credit of one quarter hour for each two hours of laboratory work per week for eleven weeks. One hour of assigned homework will accompany an average period of two hours.

Credit of one quarter hour for each three hours of shop practice for eleven weeks. No outside work will ordinarily be assigned to accompany this shop period.

The following definitions will explain the foregoing terms:

“Class work” is lecture and other classroom instruction.

“Laboratory” involves demonstration by instructor, experimentation and practice by students.

“Shop practice” involves development of manual skills and job proficiency.

## **AUTOMOTIVE MECHANICS**

### **PURPOSE OF CURRICULUM**

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobiles comes in class assignments, discussion, and shop practice.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks, buses, and a variety of gasoline-powered equipment. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

### **JOB DESCRIPTION**

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and buses. In some

communities and rural areas, they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore vehicle or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

## AUTOMOTIVE

### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
FIRST QUARTER				
PME 1101	Internal Combustion Engine	3	12	7
MAT 1101	Fundamentals of Mathematics	5	0	5
ENG 1101	Reading Improvement	2	0	2
PHY 1101	Applied Science	3	2	4
		13	14	18
SECOND QUARTER				
PME 1102	Engine Electrical and Fuel Systems	5	12	9
ENG 1102	Communication Skills	3	0	3
DFT 1101	Schematics and Diagrams:			
	Power Mechanics	0	3	1
PHY 1102	Applied Science	3	2	4
		11	17	17
THIRD QUARTER				
AUT 1123	Automotive Chassis and Suspensions Systems	3	9	6
AUT 1121	Human Relations	3	3	4
PSY 1101	Human Relations	3	0	3
AHR 1101	Automotive Air Conditioning	2	3	3
WLD 1101	Basic Gas Welding	0	3	1
		11	18	17
FOURTH QUARTER				
AUT 1124	Automotive Power Train Systems	3	9	6
AUT 1125	Automotive Servicing	3	9	6
BUS 1103	Small Business Operations	3	0	3
		9	18	15

# CARPENTRY

## PURPOSE OF CURRICULUM

Carpentry is one of the basic trades in the construction field. Carpenters construct, erect, install, and repair structures of wood, plywood, and wallboard, using hand and power tools. The work must conform to local building codes for both residential and commercial structures.

This curriculum in carpentry is designed to train the individual to enter the trade with a background in both shop skills and related information. He must have a knowledge of mathematics, blueprint reading, methods of construction and a thorough knowledge of building materials.

The modern carpenter will work on new construction, maintenance, and repair of many types of structures, both residential and commercial. He should have an understanding of building materials, concrete form construction, rough framing, roof and stair construction, the application of interior and exterior trim, and the installation of cabinets and fixtures.

Most carpenters are employed by contractors in the building construction fields. When specializing in a particular phase of carpentry, the job is designated according to the specialty as layout carpenter, framing carpenter, concrete form carpenter, scaffolding carpenter, acoustical and insulating carpenter, and finish carpenter.

## JOB DESCRIPTION

The carpenter constructs, erects, installs and repairs structures and fixtures of wood, plywood, wall board and other materials, using carpenters hand tools and power tools to conform to local building codes. He is required to use blueprints sketches or building plans for information pertaining to type of material, dimensions, layout and design of structure, and method of construction.

# CARPENTRY

## Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
FIRST QUARTER				
ENG 1101	Reading Improvement	2	0	2
MAT 1101	Fundamentals of Mathematics	5	0	5
DFT 1110	Blueprint Reading: Building Trades	0	3	1
CAR 1101	Carpentry	3	15	8
		<hr/>	<hr/>	<hr/>
		10	18	16

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
<b>SECOND QUARTER</b>				
ENG 1102	Communication Skills	3	0	3
MAT 1112	Building Trades Mathematics	3	0	3
DFT 1111	Blueprint Reading & Sketching	0	3	1
CAR 1102	Carpentry: Millwork and Cabinetmaking	3	15	8
		<hr/> 9	<hr/> 18	<hr/> 15
<b>THIRD QUARTER</b>				
PSY 1101	Human Relations	3	0	3
CAR 1113	Carpentry: Estimating	3	3	4
CAR 1103	Carpentry: Framing	3	15	8
		<hr/> 9	<hr/> 18	<hr/> 15
<b>FOURTH QUARTER</b>				
CAR 1114	Building Codes	3	0	3
BUS 1103	Small Business Operations	3	0	3
CAR 1104	Carpentry: Finishing	3	18	9
		<hr/> 9	<hr/> 18	<hr/> 15

## COSMETOLOGY

### PURPOSE OF CURRICULUM

This course outline is planned to meet the requirements of the North Carolina Board of Cosmetics Arts.

The first quarter of instruction consists of an introduction to Cosmetology including the fundamentals of ethics, history, theory, and practice. The class activities include practical lessons, lectures, demonstrations, student practice on wefts and mannequins.

The second quarter of instruction places more emphasis on manipulative skills. The acquisition of correct habits and skills is stressed. Practical work is done almost exclusively on patrons and models.

Third quarter correlates theory with practice in the study of related subjects and developing more advanced artistic skills.

In the fourth quarter the students are capable of doing work unassisted and are equipped for the state examination and outside employment. Each student, prior to filing an application to the Cosmetic Arts Board for examination, is given a test both theoretical and practical.

Cosmetologists may provide a variety of services for patrons or they may specialize in certain jobs.

**JOB DESCRIPTION**

They cut hair according to patron’s instructions or according to original style (barber) ; Comb and wave patron’s hair (hair-dresser), occasionally suggesting or creating new and varied coiffures to meet individual needs (hair stylist). Tint or bleach hair (hair colorist). Give hair and scalp treatments in accordance with standardized methods (scalp-treatment operators). Apply various lotions, creams, and packs to patron’s face to clean or treat skin, remove wrinkles, and apply cosmetics (facial operator). Clean, shape, and polish patron’s nails (manicurist).

**COSMETOLOGY**

**Suggested Curriculum by Quarters**

Course Title		Hours Per Week		Quarter	
		Class	Lab.	Hours Credit	
FIRST QUARTER					
COS 1101	Introduction to Cosmetology	5	1	66	5
COS 1102	Bacteriology, Sanitation, and First Aid	5	2	77	6
COS 1103	Shampoo and Rinse	0	2	22	1
COS 1105	Finger Waving and Pin Curling	1	9	110	4
COS 1107	Manicuring	1	2	33	1
COS 1112	Personality	2	0	22	2
		14	16	330	19
SECOND QUARTER					
COS 1111	Hair Styling and Wig Care	2	9	121	5
COS 1115	Tinting and Bleaching	1	8	99	4
COS 1106	Hair Shaping	1	9	110	4
ENG 1102	Communication Skills	3	0	33	3
		6	26	363	16
THIRD QUARTER					
COS 1110	Permanent Waving—Cold and Heat Wave	2	15	187	7
COS 1118	Anatomy I	3	2	55	4
COS 1120	Facials	1	5	66	3
PSY 1101	Human Relations	3	0	33	3
		9	22	341	17
FOURTH QUARTER					
COS 1116	Scalp Treatments	1	2	33	2
COS 1119	Anatomy II	2	4	66	3
COS 1121	Disorders of Skin, Nails, & Hair	5	3	88	6
COS 1122	Electricity	3	1	44	3
COS 1123	Chemistry	2	1	33	2
COS 1124	Operational Management (Elective)	1	0	11	1
		3	0	33	3
		17	11	308	20

## DRAFTING - FURNITURE

### PURPOSE OF CURRICULUM

This curriculum is designed to prepare students to enter the field of furniture drafting. The first two quarters contain courses basic to all fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter furniture drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel—administrative, architects, engineers, skilled workmen—and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics and industrial organization are provided to assist the student in developing understandings and confidence in his relations with other persons.

### JOB DESCRIPTION

**A draftsman** prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions: makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of triangle, T-square, and other drafting tools. Lays tracing paper on drawing and traces drawing in pencil or ink. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

**A furniture draftsman** performs the general duties of a draftsman and also specializes in making rough drafting sketches of proposed furniture pieces and then draws necessary details from the sketch. Prepares accurate scale drawings of furniture parts or groups to reduced or full scale. Prepares specifications and bills of materials for manufacture of part.

A furniture reproducer draftsman makes working drawings and templates of antique or specially ordered furniture, for reproduction purposes: draws sketch of piece showing all views, free-hand or with drawing instruments. Measures piece with rule and calipers, and notes dimensions of drawing. Makes detailed drawing of joints, carvings, and sections for shop use. Traces or draws outlines of parts on plywood or cardboard and cuts out part along outline to make template. Marks identification on templates indicating name of part, types of construction, kinds of wood, and finishes, in code or words. May make drawings from pictures when models are not available.

## DRAFTING - FURNITURE

### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
FIRST QUARTER				
DFT 1121	Drafting	3	12	7
MAT 1103	Geometry	3	0	3
ENG 1101	Reading Improvement	2	0	2
PHY 1101	Applied Science	3	2	4
		11	14	16
SECOND QUARTER				
DFT 1122	Drafting	3	6	5
DFT 1125	Descriptive Geometry	2	3	3
MAT 1102	Algebra	5	0	5
ENG 1102	Communication Skills	3	0	3
PHY 1102	Applied Science	3	2	4
		16	11	20
THIRD QUARTER				
DFT 1135	Furniture Drafting	3	12	7
MAT 1104	Trigonometry	3	0	3
PSY 1101	Human Relations	3	0	3
UPH 1111	Upholstery Materials and Methods	2	0	2
CAB 1110	Case Goods Materials and Methods	2	3	3
		13	15	18
FOURTH QUARTER				
DFT 1136	Furniture Drafting	3	15	8
DFT 1137	Furniture Specifications	3	0	3
DFT 1138	Furniture Styling and Decoration	3	0	3
BUS 1105	Industrial Organizations	3	0	3
		12	15	17





## DRAFTING - MECHANICAL

### PURPOSE OF CURRICULUM

This curriculum is designed to prepare students to enter the field of mechanical drafting. The first two quarters contain courses basic to all fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter mechanical drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel—administrative, architects, engineers, skilled workmen—and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics and industrial organization are provided to assist the student in developing understanding and confidence in his relations with other persons.

### JOB DESCRIPTION

A draftsman prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions: makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of triangle, T-square, and other drafting tools. Lays tracing paper on drawing and traces drawing in pencil or ink. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

A mechanical draftsman performs the general duties of a draftsman and also specializes in making rough drafting sketches of proposed mechanical devices, and the drawing of necessary details. Prepares accurate scale drawings of parts or machines from specifications.

## DRAFTING - MECHANICAL

### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
FIRST QUARTER				
DFT 1121	Drafting	3	12	7
MAT 1103	Geometry	3	0	3
ENG 1101	Reading Improvement	2	0	2
PHY 1101	Applied Science	3	2	4
		11	14	16
SECOND QUARTER				
DFT 1122	Drafting	3	6	5
DFT 1125	Descriptive Geometry	2	3	3
MAT 1102	Algebra	5	0	5
ENG 1102	Communication Skills	3	0	3
PHY 1102	Applied Science	3	2	4
		16	11	20
THIRD QUARTER				
DFT 1131	Mechanical Drafting	3	12	7
MAT 1104	Trigonometry	3	0	3
PSY 1101	Human Relations	3	0	3
MEC 1113	Shop Processes	2	3	3
MEC 1115	Treatment of Ferrous Metals	2	3	3
		13	18	19
FOURTH QUARTER				
DFT 1132	Mechanical Drafting	3	12	7
MEC 1114	Shop Processes	2	3	3
MEC 1116	Treatment of Non-Ferrous Metals	2	3	3
BUS 1105	Industrial Organizations	3	0	3
		10	18	16

## DRAFTING - MECHANICAL (Part Time)

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
FIRST QUARTER				
DFT 1121-1	Drafting	2	6	4
MAT 1103	Geometry	3	0	3
PHY 1101	Applied Science	3	2	4
		<hr/>	<hr/>	<hr/>
		8	8	11
SECOND QUARTER				
DFT 1121-2	Drafting	2	6	4
ENG 1101	Reading Improvement	2	0	2
PHY 1102	Applied Science	3	2	4
		<hr/>	<hr/>	<hr/>
		7	8	10

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>THIRD QUARTER</b>				
DFT 1122	Drafting	2	6	4
MAT 1102	Algebra	5	0	5
ENG 1102	Communication Skills	3	0	3
		<hr/> 10	<hr/> 6	<hr/> 12
<b>FOURTH QUARTER</b>				
DFT 1131-1	Mechanical Drafting	2	6	4
DFT 1125	Descriptive Geometry	2	3	3
PSY 1101	Human Relations	3	0	3
		<hr/> 7	<hr/> 9	<hr/> 10
<b>FIFTH QUARTER</b>				
DFT 1131-2	Mechanical Drafting	2	6	4
MAT 1104	Trigonometry	3	0	3
MEC 1115	Treatment of Ferrous Metals	2	3	3
		<hr/> 7	<hr/> 9	<hr/> 10
<b>SIXTH QUARTER</b>				
DFT 1132-1	Mechanical Drafting	1	5	3
MEC 1113	Shop Processes	2	3	3
MEC 1116	Treatment of Non Ferrous Metals	2	3	3
		<hr/> 5	<hr/> 11	<hr/> 9
<b>SEVENTH QUARTER</b>				
DFT 1132-2	Mechanical Drafting	2	6	4
MEC 1114	Shop Processes	2	3	3
BUS 1105	Industrial Organizations	3	0	3
		<hr/> 7	<hr/> 9	<hr/> 10

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The numbers 1 and 2 following the course number designates part 1 and 2.

## ELECTRICAL INSTALLATION AND MAINTENANCE

### PURPOSE OF CURRICULUM

The rapid expansion of the national economy and the increasing development of new electrical products is providing a growing need for qualified people to install and maintain electrical equipment. By mid-1960 more than 350,000 were employed as either construction electricians or maintenance electricians. Between 5,000 and 10,000 additional tradesmen are required each year to replace those leaving the industry. It is expected that the total requirements for electrical tradesmen will reach 500,000 by 1966 and 700,000 by 1970. The majority of the electrical tradesmen today are trained through apprenticeship of on-the-job training programs.

This curriculum guide will provide a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large portion of the program is devoted to laboratory and shop instruction which is designed to give the student practical knowledge and application experience in the fundamentals taught in class.

## **JOB DESCRIPTION AND REQUIREMENTS**

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice, where he will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and poly-phase alternating circuits. He will have a basic knowledge of motor and motor control systems; industrial electronic control systems; business procedures, organization, and practices; communicative skills; and the necessary background to be able to advance through experience and additional training through upgrading courses offered in the center.

### **ELECTRICAL INSTALLATION AND MAINTENANCE**

#### **Suggested Curriculum by Quarters**

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
<b>FIRST QUARTER</b>				
ELC 1112	Direct and Alternating Current	5	12	9
ENG 1101	Reading Improvement	2	0	2
MAT 1115	Electrical Math	5	0	5
PHY 1101	Applied Science	3	2	4
		<hr/> 15	<hr/> 14	<hr/> 20
<b>SECOND QUARTER</b>				
ELC 1113	Alternating Current and Direct Current Machines and Controls	5	12	9
DFT 1110	Blueprint Reading: Building Trades	0	3	1
ENG 1102	Communication Skills	3	0	3
PHY 1102	Applied Science	3	2	4
		<hr/> 11	<hr/> 17	<hr/> 17

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>THIRD QUARTER</b>				
ELC 1124	Residential Wiring	5	9	8
ELN 1118	Industrial Electronics	3	6	5
PSY 1101	Human Relations	3	0	3
DFT 1113	Blueprint Reading: Electrical	0	3	1
		11	18	17

<b>FOURTH QUARTER</b>				
ELC 1125	Commercial and Industrial Wiring	5	12	9
ELN 1119	Industrial Electronics	3	6	5
BUS 1103	Small Business Operations	3	0	3
		11	18	17

## EVENING CURRICULUM ELECTRICAL INSTALLATION & MAINTENANCE

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>FIRST QUARTER</b>				
ELC 1112-1	Direct & Alternating Current	2	6	4
ENG 1101	Reading Improvement	2	0	2
PHY 1101	Applied Science	3	2	4
		7	8	10
<b>SECOND QUARTER</b>				
ELC 1112-2	Direct & Alternating Current	2	6	4
PHY 1102	Applied Science	3	2	4
DFT 1110	Blueprint Reading: Building Trades	0	3	1
		5	11	9
<b>THIRD QUARTER</b>				
ELC 1113-1	Alternating Current & Direct Current Machines & Controls	2	6	4
MAT 1115	Electrical Math	5	0	5
ENG 1102	Communication Skills	3	0	3
		10	6	12
<b>FOURTH QUARTER</b>				
ELC 1113-2	Alternating Current & Direct Current Machines & Controls	2	6	4
DFT 1113	Blueprint Reading: Electrical	0	3	1
PSY 1101	Human Relations	5	0	3
		10	9	8
<b>FIFTH QUARTER</b>				
ELC 1124	Residential Wiring	5	8	8
BUS 1103	Small Business Operations	3	0	3
		8	8	11

The numbers 1 and 2 following the course number designate part 1 and 2.

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>SIXTH QUARTER</b>				
ELN 1118	Industrial Electronics	3	5	5
ELC 1125-1	Commercial & Industrial Wiring	2	6	4
		5	11	9
<b>SEVENTH QUARTER</b>				
ELN 1119	Industrial Electronics	3	5	5
ELC 1125-2	Commercial & Industrial Wiring	3	5	5
		6	10	10

The numbers 1 and 2 following the course number designates part 1 and part 2.

## ELECTROMECHANICAL MECHANICS

### PURPOSE OF CURRICULUM

North Carolina, in its tremendous industrial growth, has the need for highly skilled personnel to maintain machines that are controlled by electrical and fluid power devices. This curriculum is designed to prepare students to repair and maintain machinery, electrical wiring and fixtures, and hydraulics and pneumatic devices found in industrial establishments. He uses blueprints and sketches, manuals and codes, and works with handtools made for electricians and machinists. He diagnoses causes of malfunctions in industrial machinery. He sets up and operates machine tools such as the lathe, milling machine, and drill press to repair or make machine parts. He installs machine parts, starts machines, observes operation, and inspects the machine with test instruments.

### JOB DESCRIPTION

An electromechanical serviceman may be required to install, maintain and service electrical and mechanical equipment. He should be able to follow directions from blueprints and sketches, use handtools and metalworking machines, and check the work with measuring and testing instruments. He operates metalworking machines, such as the lathe, milling machine and drill press to make repairs. He uses the micrometer and calipers to verify dimensions. He assembles wires, insulation, and electrical components using handtools and soldering equipment. He tests electrical circuits and components to locate shorts, faulty connections, and defective parts, using tests meters. He also inspects and tests hydraulic equipment after new installation or repairs.

## ELECTROMECHANICAL MECHANICS

### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
<b>FIRST QUARTER</b>				
MAT 1101	Fundamentals of Mathematics	5	0	5
ENG 1101	Reading Improvement	2	0	2
DFT 1104	Blueprint Reading: Mechanical	0	3	1
WLD 1101	Basic Welding and Cutting	2	3	3
MEC 1101	Machine Shop Theory and Practice	3	12	7
		<hr/>	<hr/>	<hr/>
		12	18	18
<b>SECOND QUARTER</b>				
MAT 1115	Electrical Math	5	0	5
ENG 1102	Communication Skills	3	0	3
DFT 1113	Blueprint Reading: Electrical	0	3	1
MEC 1102	Machine Shop Theory and Practice	3	12	7
ELC 1121	Electrical Machines and Controls	2	2	3
		<hr/>	<hr/>	<hr/>
		13	17	19
<b>THIRD QUARTER</b>				
ELC 1112	Direct & Alternating Current	5	12	9
MEC	General Maintenance and Repair	3	6	5
PSY 1101	Human Relations	3	0	3
		<hr/>	<hr/>	<hr/>
		11	18	17
<b>FOURTH QUARTER</b>				
ELC 1113	Alternating Current and Direct Current Machines and Controls	5	12	9
ELC 1122	General Maintenance & Repair (Elec. & Mech.)	3	6	5
BUS 1105	Industrial Organizations	3	0	3
		<hr/>	<hr/>	<hr/>
		11	18	17

## MACHINIST

### PURPOSE OF CURRICULUM

This curriculum was prepared to meet a definite need for training of machinists. Surveys recently completed in North Carolina show that many of the existing industries lack time and facilities for training enough machinists to meet present and planned needs. Expanding industries already located in our State and new industries under development invariably express the need for skilled craftsmen who have the background knowledge and potential to advance.

This guide is designed to give learners the opportunity to acquire basic skills and the related technical information necessary to gain employment and build a profitable career in the machine shop industry in the State. It is comprised of the joint views of committees responsible for its development.

JOB DESCRIPTION

The machinist is a skilled metal worker who shapes metal parts by using machine tools and hand tools. His training and experience enable him to plan and carry through all the operations needed in turning out a machined product and to switch readily from one kind of product to another. A machinist is able to select the proper tools and material required for each job and to plan the setting and finishing operations in their proper order so that he can complete the finished work according to blueprint or written specifications. He makes standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining. He often uses precision measuring instruments such as micrometers and gages to measure the accuracy of his work to thousandths of an inch.

This skilled worker must be able to set up and operate most types of machine tools. The machinist also must know the composition of metals so that he can heat and quench cutting tools and parts to improve machinability. His wide knowledge enables him to turn a block of metal into an intricate, precise part.

MACHINIST

Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
FIRST QUARTER				
MEC 1101	Machine Shop Theory and Practice	3	12	7
MAT 1101	Fundamentals of Mathematics	5	0	5
DFT 1104	Blueprint Reading: Mechanical	0	3	1
ENG 1101	Reading Improvement	2	0	2
PHY 1101	Applied Science	3	2	4
		13	17	19
SECOND QUARTER				
MEC 1102	Machine Shop Theory and Practice	3	12	7
MAT 1103	Geometry	3	0	3
DFT 1105	Blueprint Reading: Mechanical	0	3	1
PHY 1102	Applied Science	3	2	4
ENG 1102	Communication Skills	3	0	3
		12	17	18

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>THIRD QUARTER</b>				
MEC 1103	Machine Shop Theory and Practice	3	12	7
MEC 1115	Treatment of Ferrous Metals	2	3	3
DFT 1106	Blueprint Reading: Mechanical	0	3	1
MAT 1104	Trigonometry	3	0	3
PSY 1101	Human Relations	3	0	3
		<hr/> 11	<hr/> 18	<hr/> 17

#### FOURTH QUARTER

MEC 1104	Machine Shop Theory and Practice	3	12	7
MEC 1116	Treatment of Non-Ferrous Metals	2	3	3
WLD 1101	Basic Gas Welding	0	3	1
MAT 1123	Machinist Mathematics	3	0	3
BUS 1105	Industrial Organizations	3	0	3
		<hr/> 11	<hr/> 18	<hr/> 17

#### THE BANNER ELK PROGRAM OF PRACTICAL NURSE EDUCATION

Caldwell Technical Institute operates an additional Practical Nurse Education Program at Banner Elk, North Carolina. The clinical practice for this program is held in the Charles A. Cannon Jr. Memorial Hospital, Banner Elk, North Carolina. The nursing students are provided free meals, rooms, and health services by the hospital. Classes are held in the nurses' dormitory located on the Lee's McRae College campus. The course of study is exactly as stated below.

### PRACTICAL NURSING EDUCATION

#### PURPOSE OF CURRICULUM

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand an increased number of well-trained personnel for health services. Realizing this need, the State Department of Community Colleges, in conjunction with local hospitals, administers programs of practical nurse education in local school systems, community colleges, technical institutes, and in industrial education centers throughout the state.

The aim of the Practical Nurse Education Program is to make available to qualified persons the opportunity to prepare for

participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Students are selected on the basis of demonstrated aptitude for nursing as determined by pre-entrance tests, interviews with faculty members, high school record, character references, and reports of medical and dental examinations.

Throughout the one-year program, the student is expected to grow continuously in acquisition of knowledge and understandings related to nursing, the biological sciences, the social sciences, and in skills related to nursing practice, communications, interpersonal relations, and use of good judgment. Evaluation of student performance consists of tests on all phases of course content, evaluation of clinical performance, and evaluation of adjustment to the responsibilities of nursing. A passing score is required on all graded work, plus demonstrated progress in application of nursing skills to actual patient care.

## **JOB DESCRIPTION**

Graduates of accredited programs of practical nurse education are eligible to take the licensing examination given by the North Carolina Board of Nursing. This examination is given twice each year, usually in April and September. A passing score entitles the individual to receive a license, and to use a legal title "Licensed Practical Nurse." The license must be renewed annually. The Licensed Practical Nurse can apply for licensure in other states on the basis of a satisfactory examination score, without repeating the examination.

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices, and, in some localities, public health facilities. In all situations, the LPN functions under supervision of a registered nurse and or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understandings of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every

individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

## PRACTICAL NURSING

### Suggested Curriculum by Quarters

Course Title		Hours	Per Week	Quarter
		Class	Lab.	Hours Credit
FIRST QUARTER				
ENG 1101	Reading Improvement	2	0	2
PSY 1101	Human Relations	3	0	3
NUR 1101	Basic Science	5	4	6
NUR 1102	Orientation to Vocation			
	Relationships	2	0	2
NUR 1103	Introduction to Patient Care	6	6	8
		18	10	21
SECOND QUARTER				
NUR 1104	Basic Principles of			
	Drug Administration	3	0	3
NUR 1105	Care of Patients with Medical-			
	Surgical Conditions I	9	24	17
		12	24	20
THIRD QUARTER				
NUR 1106	Maternal and Child Care	6	12	10
NUR 1107	Care of Patients with Medical-			
	Surgical Conditions II	6	12	10
		12	24	20
FOURTH QUARTER				
NUR 1108	Care of Infants and Children	6	12	10
NUR 1109	Care of the Seriously Ill			
	and Injured	4	12	8
NUR 1110	Vocational Relationships	2	0	2
		12	24	20

## PRODUCTION ASSISTANT (FURNITURE OPTION)

The Production Assistant accepts task assignments from and is directly responsible to the plant superintendent. He is directly concerned with maintenance of production flow of high quality articles. He assists the superintendent in coordinating all manufacturing activities leading to the proper quantity and quality of production. He is also concerned with cost analysis and with more efficient production methods.

In this position he must have a good understanding of the total manufacturing process including raw materials needed, production scheduling, billing and routing, construction methods, cost analysis and quality control.

Personal characteristics needed by the Production Assistant include intelligence, ambition, initiative, ability to work well with different types of people, mechanical aptitude, numerical ability, and ability to analyze problem situations and suggest possible solutions.

## PRODUCTION ASSISTANT CURRICULUM

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
FIRST QUARTER				
DFT 1121-1	Drafting	2	5	4
FURN 1104	Characteristics of Woods	2	0	2
FURN 1107	Wood Finishes	1	3	2
FURN 1108	Production Equipment I	1	3	2
SOC 1101	Human Relations I	3	0	3
		9	11	13
		Total Contact Hours		20
SECOND QUARTER				
FURN 1103	Construction & Billing I	1	3	2
DFT 1121-2	Drafting	2	6	4
FURN 1109	Production Equipment II	1	3	2
FURN 1105	Glues	1	0	1
ISC 1102	Industrial Organization & Management	3	0	3
		8	12	12
		Total Contact Hours		20
THIRD QUARTER				
FURN 1103	Construction & Billing II	1	3	2
ISC 1110 F	Time Study & Time Standards	2	2	3
FURN 1106	Furniture Sanding	1	3	2
FURN 1112	Routing & Process Sequence	1	3	2
ISC 1113	Quality Control	3	0	3
		8	11	12
		Total Contact Hours		19
FOURTH QUARTER				
ISC 1103	Production Control	1	3	2
BUS 1101	Cost Records & Cost Estimates	2	0	2
BUS 1111	Collecting & Reporting Information	2	2	3
ISC 1114	Supervisory Responsibilities	3	0	3
DFT 1130	Drafting ( Sketching)	2	5	4
		10	10	14
		Total Contact Hours		20

## TEXTILE PRODUCTION

### PURPOSE OF CURRICULUM

This program in Textile Production is designed to provide training for individuals employed or who are seeking employment in the textile industry. It is designed to provide the individual with the basic knowledges and skills necessary to enter into or to advance into the more responsible positions requiring leadership ability and a thorough knowledge of textile operations. Courses are included in this program to provide the individual with an understanding of the manufacturing process from the raw product to finished material. Courses such as Textile Fiber, Yarn Manufacturing, Weaving, Knitting, Fabric Design and Analysis, and Textile Testing are designed with laboratories to provide experiences in the practical as well as the theoretical aspects of the industry. The program concludes with courses in Industrial Organizations, Supervisory Responsibility, Cost Records and Cost Estimates, Production Control, and Work Measurement to provide the individual with the background and knowledge for advancement into supervisory responsibilities.

The textile industry is North Carolina's leading employer. Its demand for trained personnel in the production phase has greatly increased over the past few years. Many job opportunities are available in responsible jobs in production and textile testing for the graduate of this program.

## TEXTILE PRODUCTION

### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter	Contact Hours
		Class	Lab.	Hours Credit	
FIRST QUARTER					
MAT 1101	Fundamentals of Mathematics	5	0	5	55
ENG 1101	Reading Improvement	2	0	2	22
TEX 1101	Yarn Manufacturing I	3	3	4	66
ISC 1001	Industrial Safety	3	0	3	33
TEX 1104	Textile Fibers	2	2	3	44
		15	5	17	220
SECOND QUARTER					
ENG 1102	Communication Skills	3	0	3	33
TEX 1108	Yarn Manufacturing II	5	6	7	121
TEX 1106	Weaving	2	3	3	55
PHY 1101	Applied Science	3	2	4	55
		13	11	17	264

Course Title		Hours	Per Week	Quarter	
		Class	Lab.	Hours Credit	
THIRD QUARTER					
PSY 1101	Human Relations	3	0	3	33
PHY 1102	Applied Science	3	2	4	55
TEX 1110	Knitting	3	3	4	66
TEX 1115	Textile Testing	3	3	4	66
TEX 1120	Fabric Design and Analysis	3	3	4	66
		15	11	19	286
FOURTH QUARTER					
BUS 1105	Industrial Organizationus	3	0	3	33
ISC 1125	Supervisory Responsibility	3	0	3	33
ISC 1121	Cost Records and Cost				
	Estimates	3	0	3	33
ISC 1110	Production Control	3	2	4	55
ISC 1123	Work Measurement	3	2	4	55
		15	4	17	209

## WELDING

### PURPOSE OF CURRICULUM

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed Manpower Surveys shows quite clearly that many welders will be needed annually to fill present vacancies in the State.

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques, skills essential for successful employment in the welding field and metals industry.

The field of welding offers a person prestige, security, and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production shop, job shop, and many others.

### JOB DESCRIPTION

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding metals, arc, gas, and resistance welding are the three most important.

The principal duty of the welder using manual procedure is to control the melting by directing the heat, from an electric arc or gas welding torch, and to add filler metals where necessary to

complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

## WELDING

### Suggested Curriculum by Quarters

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
FIRST QUARTER				
WLD 1120	Oxyacetylene Welding and Cutting	3	12	7
MAT 1101	Fundamentals of Mathematics	5	0	5
DFT 1104	Blueprint Reading: Mechanical	0	3	1
PHY 1101	Applied Science	3	2	4
ENG 1101	Reading Improvement	2	0	2
		<hr/>	<hr/>	<hr/>
		13	17	19
SECOND QUARTER				
WLD 1121	Arc Welding	3	12	7
MAT 1103	Geometry	3	0	3
DFT 1117	Blueprint Reading: Welding	0	3	1
PHY 1102	Applied Science	3	2	4
ENG 1102	Communication Skills	3	0	3
		<hr/>	<hr/>	<hr/>
		12	17	18
THIRD QUARTER				
WLD 1124	Pipe Welding	3	12	7
WLD 1123	Inert Gas Welding	1	3	2
WLD 1112	Mechanical Testing and Inspection	1	3	2
DFT 1118	Pattern Development and Sketching	0	3	1
PSY 1101	Human Relations	3	0	3
		<hr/>	<hr/>	<hr/>
		8	21	15
FOURTH QUARTER				
WLD 1122	Commercial and Industrial Practices	3	9	6
WLD 1125	Certification Practices	3	6	5
MEC 1112	Machine Shop Processes	0	6	2
BUS 1105	Industrial Organizations	3	0	3
		<hr/>	<hr/>	<hr/>
		9	21	16

## EVENING CURRICULUM

### WELDING

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab.	
FIRST QUARTER				
WLD 1120-1	Oxyacetylene Welding & Cutting	2	6	4
DFT 1104	Blueprint Reading: Mechanical	0	3	1
PHY 1101	Applied Science	3	2	4
		<hr/>	<hr/>	<hr/>
		5	11	9

Course Title		Hours Per Week		Quarter
		Class	Lab.	Hours Credit
<b>SECOND QUARTER</b>				
WLD 1120-2	Oxyacetylene Welding & Cutting	2	6	4
ENG 1101	Reading Improvement	2	0	2
PHY 1102	Applied Science	3	2	4
		<hr/> 7	<hr/> 8	<hr/> 10
<b>THIRD QUARTER</b>				
WLD 1121-1	Arc Welding	2	6	4
MAT 1101	Fundamentals of Math	5	0	5
ENG 1102	Communication Skills	3	0	3
		<hr/> 10	<hr/> 6	<hr/> 12
<b>FOURTH QUARTER</b>				
WLD 1121-2	Arc Welding	2	6	4
DFT 1117	Blueprint Reading: Welding	0	3	1
MAT 1103	Geometry	3	0	3
		<hr/> 5	<hr/> 9	<hr/> 8
<b>FIFTH QUARTER</b>				
WLD 1124-1	Pipe Welding	2	6	4
WLD 1123	Inert Gas Welding	1	3	2
WLD 1112	Mechanical Testing & Inspection	1	3	2
		<hr/> 4	<hr/> 12	<hr/> 8
<b>SIXTH QUARTER</b>				
WLD 1124-2	Pipe Welding	2	5	4
DFT 1118	Pattern Development & Sketching	0	3	1
MEC 1112	Machine Shop Processes	0	6	2
		<hr/> 2	<hr/> 14	<hr/> 7
<b>SEVENTH QUARTER</b>				
WLD 1122	Commercial & Industrial Practices	3	9	6
BUS 1105	Industrial Organizations	3	0	3
		<hr/> 6	<hr/> 9	<hr/> 9
<b>EIGHTH QUARTER</b>				
WLD 1125	Certification Practices	3	6	5
PSY 1101	Human Relations	3	0	3
		<hr/> 6	<hr/> 6	<hr/> 8

\* The numbers 1 and 2 following the course number designates part 1 and part 2.



*Adult Education and  
Extension Division*



## **EXTENSION DIVISION**

The Caldwell Technical Institute provides training in numerous subjects through its Extension programs. Extension classes are held both at the institute and at various locations throughout Caldwell, Watauga and Avery Counties. These classes are designed to prepare individuals for employment or to upgrade workers already employed.

The extension department also serves area industries and public agencies by providing training for their employees. Training under this division of the Institute can be offered at any time a need for such training is established. Full details can be obtained by contacting the Director of Adult Education at the Institute.

### **Admission Requirements**

Generally speaking any individual who is 18 years of age or whose high school class has graduated is eligible for admission to extension classes; applicants are usually admitted on the first come, first served basis. Some classes may have specific admission requirements, in such cases the Director of Adult Education will inform applicants of these requirements.

### **Expenses**

Many of the extension classes are offered without charge to the students; in other cases a small fee is charged to cover the cost of instructional supplies. Any charges should be paid at the first class session.

### **Certificates**

The Extension Division issues certificates to those who complete a course satisfactorily.

## EXAMPLES OF EXTENSION PROGRAMS OFFERED

Auto Mechanics	Loom Fixing
Auto Electricity	Machine Shop Practice
Basic Electronics	Pilot's Ground School
Blueprint Reading	Power Sewing
Electricity	Slide Rule
Electronic Circuits	Small Engine Repair
Furniture Upholstery	Supervisory Development Courses
Instrumentation	Tourist Serving Training
Janitorial Maintenance	Upholstering
	Waitress Training

## AGRICULTURAL

Farm Records	Pesticides
Fertilizers and Lime	Welding for Farmers

## BUSINESS

Typing	Shorthand	Bookkeeping
	Speed Writing	

## CONSTRUCTION

Bricklaying	Plumbing
Carpentry	Ceramic Tile
Housewiring	Construction

## PUBLIC AGENCIES

Fire Training	Nurses' Aide
Fire Officer Training	Orderlies Training
Fire First Aid	Police Training
	Teacher Aides

## SUPERVISORY DEVELOPMENT

The Art of Motivating People	Effective Communications
Effective Writing	Job Methods
Effective Speaking	Industrial Safety & Accident
Human Relations	Prevention
Industrial First Aid	Job Analysis Training
	Work Measurement

This list, of course, is in no way comprehensive, but is offered as a general sample of extension-type courses. For further information on this division contact the Director of Adult Education.

## GENERAL ADULT EDUCATION

The General Adult Education division of the Caldwell Technical Institute is primarily concerned with raising the educational level of adults and providing cultural improvement courses. The Institute is prepared to provide training at all educational levels from grade one (learning to read and write) up through high school equivalency. This training is provided through organized classes and through the school's Learning Laboratory.

## ADULT BASIC EDUCATION

Adult Basic Education is provided for men and women eighteen years of age and older not currently enrolled in a public school. Its purpose is to improve the economic and social standing of

adults in the community. Persons enrolled may be learning to read and write, or they may review English, math, social studies, or science; however, the main objective of this program is to raise adults to the educational level required for attending the adult high school classes.

There are no charges for these courses. The books are furnished by Caldwell Technical Institute.

The courses are 11 weeks in duration. Classes are scheduled to meet two nights a week with most of the classes meeting three hours each night. A student may stay in Group 1 (grades 1-4) or in Group 11 (grades 4-8) as long as he or the instructor deems it necessary. Progression is mainly individual although they are in groups. These classes are held in Caldwell, Watauga and Avery counties on a continuing basis and interested persons should contact the Adult Education Director at Caldwell Technical Institute or any education official in the public schools.

### **ADULT HIGH SCHOOL DIPLOMA PROGRAM**

The Adult High School Diploma program is not designed to compete with regular High School programs, but its primary purpose is to give mature adults who have less than a 12th grade education another opportunity to earn the High School Diploma. Students enrolled in public secondary schools are not eligible to enroll in the Adult High School program. Since Adult High School classes do not operate on a unit system, the adult student is not required to submit a transcript of High School records. However all adults regardless of the number of High School units previously earned, who enroll in the program must demonstrate proficiency in English, Math, Social Studies, and Science at the 12th grade level before they are recommended for the Adult High School Diploma.

Adult High School classes are offered in the evening program at Caldwell Technical Institute and at other locations in Caldwell, Watauga, and Avery counties. These classes usually meet two nights weekly from 6-10 P.M. New classes begin in September, January, March and June.

When students make satisfactory scores on the four subject area tests, they are recommended to the Board of Education in Caldwell, Watauga or Avery Counties to receive the Adult High School Diploma. Graduation Ceremonies will be held several times each year for the Adult Diploma.

In addition to the organized classes at the basic and secondary education levels, the General Adult Division offers a large variety of courses both at the school and throughout the area it serves. A sampling of courses under this heading would include:

Effective Listening Program

Modern Math for Parents

Speed Reading and Reading Improvement

Creative Art  
Creative Writing  
Public Speaking  
Interior Decorating for Housemakers  
First Aid  
Auto Mechanics for Car Owners  
Ceramic Arts and Crafts

Additional courses are offered as the demand becomes evident. Details of these and other courses may be obtained from the Director of Adult Education.

### **Admission Requirements**

Any adult who has a desire to raise his or her educational level and who is able to benefit from a course may enroll in the general adult classes.

### **Expenses**

There is no charge for the Basic Education and only a small fee to cover the cost of instructional materials in the Secondary I and II classes. Charges for other general adult classes are determined by the length of the course and instructional materials needed.

## **LEARNING LABORATORY**

### **The Caldwell Technical Institute Learning Lab— A Brief Summary of What It Is**

The Learning Laboratory program at the Caldwell Technical Institute is designed to provide study opportunities in practically any field that might be of interest to residents of the Caldwell County area. Programmed study courses to meet the needs of the non-reader as well as the college graduate are available in the laboratory.

Persons interested in participating in the Learning Laboratory, after an initial interview, are provided study materials starting at a point in keeping with their achievement level and are able to progress from there. Students may elect study times adjusted to their own convenience and schedules in that the Laboratory will be in operation on a schedule adjusted to the needs of participants.

A "Learning Laboratory" is essentially an individual study situation, in which any person eighteen years of age or older may undertake most any level of Reading, English, Math, Social Studies, or Science that he desires. All of the material used in the lab is programmed; therefore, there is no need for a classroom teacher.

Programmed material is designed in such a manner as to aid the student in learning information in small sequences called

"Frames." Each frame requires an immediate response, and each response is immediately checked. If the student fails to learn, or learns incorrectly, the program makes the correction or re-teaches. In this manner the student progresses at his own rate; he neither has to wait for others to catch up nor slow down to someone else's rate.

The coordinator, the person in charge of the learning lab, has the responsibility of locating the level at which a student can proceed to learn by himself, of formulating the sequence of programs the student will undertake to achieve his desired goal, and of administering the tests that will assure the student that he is approaching his goal.

Because there are no classes in the learning lab, there is no need for anyone to wait until the new quarter to enroll. Each student sets his own work sessions and attends the lab as many days each week and as many hours each day as he thinks he can attend regularly. There are no fees, and any adult can take as many courses as fit his needs.

The majority of students presently enrolled in learning labs are seeking to prepare themselves for the high school equivalency examination or to gain educational improvement of their own choosing. Some, however, are enrolled to upgrade themselves for a possible job promotion; while others are using the program for reinforcement in a technical institute curriculum or in their college work.

The stated purposes for the existence of the learning laboratories suggested that every effort should be made to meet the needs of those who are interested in participating in the program.

The following pages comprise a list of the courses presently offered in the learning lab with a brief description of each course. The initials "A.C.T.," found in parentheses at the end of each course description, represent the words "approximate completion time." It should be kept in mind that these figures are only estimates for the average student and that each student will function best at his own rate and, therefore, it is impossible to determine the exact time necessary for an individual to complete any given course. New courses of study are added regularly.

### **Admission Requirements For Learning Laboratory**

And adult who has a desire to raise his or her educational level and who is able to benefit from study in the Learning Laboratory may enroll.

### **Expenses**

There is no charge for study in the Learning Laboratory.

# COURSE OFFERINGS

## BUSINESS

Course	Description
<b>Business Mathematics</b> —This is a series of four courses made up of the following:	
1. Fundamentals of Business Mathematics.	
2. Interest, Negotiable Instruments, and Payroll Mathematics.	
3. Business Mathematics in Management Decisions.	
4. Mathematics of Accounting and Finance. (A.C.T. complete—75 hours)	
<b>Basic Filing</b> —A short course designed on the alphabetic system of filing. (A.C.T.)—15 hours)	
<b>Stenospeed</b> —An “ABC” shorthand. Dictation is given on tape. (A.C.T.—45 hours)	
<b>Bookkeeping (Temac)</b> —A basic course for the beginner, written on a high school level. (A.C.T.—20 hours)	
<b>The Accounting Process</b> —A fundamental course in the principles of accounting. (A.C.T.—12 hours)	

## COMPUTER-RELATED PROGRAMS

Course	Description
<b>Introduction to Binary Arithmetic</b> —Binary Arithmetic (base 2) is the math through which computers operate. (A.C.T.—4 hours)	
<b>Introduction to Transistors</b> —Deals mainly with transistors related to the structure and function of computers. (A.C.T.—12 hours)	
<b>Basic Transistor Circuits</b> —This course is based on an Auto-Instructional Teaching Text on Digital Computer Fundamentals developed by the Raytheon Company. (A.C.T.—12 hours)	
<b>Introduction to Electronic Data Processing</b> —This is a basic course dealing with the why and how of computers. (A.C.T.—20 hours)	
<b>Required Cobol - 1961</b> —This is an extensive course dealing with the language of computers. (A.C.T.—120 hours)	

## ENGLISH

Course	Description
<b>2200, 2600, 3200</b> —A series comprising a complete grammar program that covers seventh grade through high school level. The student is placed in one of the three courses depending on which his need might be. (A.C.T. for each—45 hours)	
<b>Programmed English</b> —A complete freshman college level grammar course. (A.C.T.—50 hours)	
<b>300 Commas</b> —A short course in the proper use of commas. (A.C.T.—8 hours)	

**Lessons for Self-Instruction in Basic Skills**—A series made up of short courses in areas that tend to give problems in grammar. The short courses include:

1. Capitalization.
2. Punctuation.
3. Sentence Patterns.
4. Verbs, Number, and Case. (A.C.T. for each course—5 hours)

**Spelling**—An elementary spelling course, including basic spelling rules and procedures for using the dictionary. (A.C.T.—25 hours)

**Words**—A basic course in vocabulary development, written on a junior high school level. (A.C.T.—15 hours)

**Vocabulary Building**—This course teaches the meaning and usage of prefixes, suffixes, stems, word families, and groups. (A.C.T.—8 hours)

**Improving Your Written Communication**—A course designed primarily to improve business-oriented correspondence. (A.C.T.—8 hours)

## FOREIGN LANGUAGE

Course	Description
<b>Programmed French</b>	A French reading and writing course, teaching an active vocabulary of over 1600 words and a passive vocabulary of 900 more words. (A.C.T.—90 hours)
<b>Basic German</b>	A basic reading course, carrying the student through most of the verb tenses. The phonetic vocabulary is taught on tape. (A.C.T.—50 hours)
<b>Basic Spanish</b>	An extensive course in reading and writing, with the phonetic vocabulary taught on tape. (A.C.T.—180 hours)

## GENERAL INTEREST

Course	Description
<b>The Analysis of Behavior</b>	A survey of terms and concepts applied in a study of animal behavior. (A.C.T.—12 hours)
<b>Your Study Skills</b>	A simple approach to the problem of learning how to study. (A.C.T.—4 hours)

## READING

### COMPREHENSIVE READING

Course	Description
<b>Reading Laboratories</b>	Programs designed to improve the student's ability to retain what he reads. Work is also done on vocabulary development and grammar usage with a resulting effect on spelling. The course covers all grade levels.
<b>Reading for Understanding</b>	A reading course designed to develop or re-develop concentration processes. This program is especially helpful to students who have been out of school for an extended length of time.

## SPEED READING

Course	Description
<b>Craig Reading Program</b>	A program using a student-controlled machine to increase reading rate and eye coordination. A workbook is also used to insure that comprehension does not suffer with the increase in speed.
<b>Reading Accelerator</b>	A program using a device that is placed over a workbook. A slide moves down the page at a rate established by the student.

## MATHEMATICS

Course	Description
<b>Univox Arithmetic</b>	This course is written at a very elementary level, with emphasis on the four basic operations. (A.C.T.—25 hours)
<b>Multiplication and Division (T.M.I.)</b>	This is an elementary course in the two basic operations mentioned (A.C.T.—20 hours)
<b>A.S.M.D. (B.R.L.)</b>	This is also a basic course in the four arithmetic operations, with one book devoted to each operation. (A.C.T.—8 hours per book)
<b>Basic Math (Temac)</b>	This is an extensive course in the basic math processes, fractions, percents, and decimals, with emphasis on both theory and application. (A.C.T.—150 hours)
<b>Basic Math Measurement</b>	This program works with the more common mathematical measurements, including those related to geometric figures. (A.C.T.—30 hours)
<b>Seventh-Grade Mathematics</b>	This program is much like the “Basic Math” course mentioned above, but it is written on a higher reading level. It also carries the student completely through high school general math. (A.C.T.—130 hours)
<b>Fractions (Tutor Text)</b>	This is a very thorough program in both the theory and application of fractions. It is written on a relatively-high reading level. (A.C.T.—12 hours)
<b>Decimal Numbers (T.M.I.)</b>	This is a two-volume, elementary program in decimal numbers. (A.C.T.—20 hours)
<b>Computing Square Roots</b>	This is a short, efficient method for teaching the theory and application of square roots. (A.C.T.—3 hours)
<b>Introduction to Probability</b>	This program supplies a simple method for learning an interesting subject. (A.C.T.—2 hours)
<b>Lessons for Self-Instruction in Basic Skills</b>	This is a series of short courses, including units on addition, subtraction, multiplication, and division. Work is done with whole numbers, fractions, decimals, and percents. (A.C.T.—4 hours for each unit)
<b>An Introduction to Verbal Problems in Algebra (Temac)</b>	This is a basic, introductory course and requires only a basic understanding of algebra. (A.C.T.—20 hours)
<b>Algebra I and Algebra II (Temac)</b>	These are extensive programs parallel with the ones taught in the public schools. When a student completes these courses, he is prepared for college algebra. (A.C.T.—150 each)

**Plane Geometry (Temac)**—This is a very thorough program, requiring some background in algebra as a prerequisite. (A.C.T.—80 hours)

**Solid Geometry (Temac)**—A complete course requiring plane geometry as a prerequisite. (A.C.T.—50 hours)

**Trigonometry (Temac)**—A college-level trig course requiring a good background in algebra. (A.C.T.—80 hours)

**Analytic Trigonometry (Temac)**—A course using trig functions and the field of complex numbers. (A.C.T.—80 hours)

**Introductory Calculus**—This course goes into both differential and integral calculus. (A.C.T.—50 hours)

**Practical Mathematics (Tutor Text)**—A practical application of algebra is taught for business; technical, and laboratory situations, as well as for every-day use. (A.C.T.—15 hours)

**The Slide Rule (Tutor Text)**—A thorough course on the mechanics of the slide rule as well as practical applications. It covers up to the log-log scales. A good foundation in math is needed for this course. (A.C.T.—15 hours)

**Advance Slide Rule**—A course specifically designed to be used with the log-log duplex trig, and log-log duplex decitrig slide rules. (A.C.T.—35 hours)

**Logarithms**—A short course dealing with four-place logarithms, antilogs, multiplication, division, raising to powers, finding roots, and problems involving all operations. (A.C.T.—6 hours)

**Introduction to Modern Math (Behavioral Research)**—Introductory course to the concepts involved in the new approach to learning math.

**Modern Mathematics for the Junior High School (Temac)**—A four-volume course presenting the “new” or “modern” math on a junior high level. (A.C.T.—120 hours)

**Modern Algebra (Temac)**—A six-unit, modern approach to traditional algebra. (A.C.T.—150 hours)

## SCIENCE

### Course

### Description

**Biology and Chemistry**—A high school level science course covering the subjects in general terms. There are no actual laboratory experiments. (A.C.T.—40 hours)

**Work and Machines**—A high school level physics course. There are no actual experiments. (A.C.T.—20 hours)

**Measurements, Meteorology, and Astronomy**—A course offering the essentials in each area. (A.C.T.—40 hours)

**Sound, Light, Electricity, and Communication**—A course offering the essentials in each area mentioned. (A.C.T.—40 hours)

**Physical Science Program**—A series made up of the following units:

- 1. Mechanics.
- 2. Engines.
- 3. Astronomy.
- 4. Geology.
- 5. Meteorology.

(A.C.T.—8 hours each unit)

**Vectors**—A physics course requiring only a basic knowledge of algebra as a prerequisite. (A.C.T.—12 hours)

**Principles of Chemistry**—An extremely thorough, theory-oriented, freshman college level course. No lab work is involved. (A.C.T.—180 hours)

**SOCIAL STUDIES**

Course	Description
<b>Geography of the U.S. (Univox)</b>	—A short, elementary course used mostly with students who have reading difficulties. (A.C.T.—15 hours)
<b>Geography of the U.S. (B.R.L.)</b>	—A complete course with extensive map study. A.C.T.—40 hours)
<b>Maps: How We Read Them</b>	—A short course using maps of the United States as examples. (A.C.T.—4 hours)
<b>History of the United States</b>	—Covers general U.S. history from the early explorers through the present. (A.C.T.—20 hours)
<b>How a Bill Becomes a Law</b>	—A government-related course touching almost every phase of the process of a bill becoming a law and other congressional-related topics. (A.C.T.—15 hours)
<b>The Constitution</b>	—A course dealing with the Constitution from its historical background to the most recent amendments. (A.C.T.—15 hours)



## ***Course Descriptions***

## COURSE NUMBERING SYSTEM

- 1—All Freshman Technical Courses are indicated by a three-letter prefix preceded by the letter “T” and numbered between 100 and 200.
- 2—All Sophomore Technical Courses are indicated by a three-letter prefix preceded by the letter “T” and numbered between 200 and 300.
- 3—All Vocational Courses are indicated by a three-letter prefix and numbered between 1000 and 2000.

## COURSE DESCRIPTIONS AUTOMOTIVE MECHANICS

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>PME 1101 Internal Combustion Engine</b>	3	12	7
Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing. Prerequisite: None.			
<b>PME 1102 Engine Electrical and Fuel Systems</b>	5	12	9
A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system. Prerequisite: PME 1101.			

**AUT 1121 Braking Systems** 3 3 4  
 A complete study of various braking systems employed on automobiles and light weight trucks. Emphasis is placed on how they operate, proper adjustment, and repair. Prerequisite: PHY 1102.

**AUT 1123 Automotive Chassis and Suspension Systems** 3 9 6  
 Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end alignment. Prerequisite: PME 1102.

**AUT 1124 Automotive Power Train Systems** 3 9 6  
 Principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair. Prerequisites: PHY 1102, AUT 1123.

**AUT 1125 Automotive Servicing** 3 9 6  
 Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of experiences in testing, adjusting, repairing and replacing. Prerequisites: AUT 1123, AUT 1121, AHR 1101.

**AHR 1101 Automotive Air Conditioning** 2 3 3  
 General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system. Prerequisite: PHY 1102.

## BUSINESS EDUCATION

**T-BUS 101 Introduction to Business** 5 0 5  
 A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None

**T-BUS 102 Typewriting** 2 3\* 3  
 Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Prerequisite: None

**T-BUS 103 Typewriting** 2 3\* 3  
 Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Prerequisite: T-BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.

**T-BUS 104 Typewriting** 2 3\* 3  
 Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: T-BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.

**T-BUS 106 Shorthand** 3 2 4  
 A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. Prerequisite: None

- T-BUS 107 Shorthand** 3 3 4  
Continued study of theory with greater emphasis on dictation and elementary transcription. Prerequisite: T-BUS 106 or the equivalent.
- T-BUS 108 Shorthand** 3 2 4  
Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Prerequisite: T-BUS 107.
- T-BUS 110 Office Machines** 2 2 3  
A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator. Prerequisite: None
- T-BUS 112 Filing** 3 0 3  
Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing. Prerequisite: None.
- T-BUS 115 Business Law** 3 0 3  
A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies. Prerequisite: None.
- T-BUS 116 Business Law** 3 0 3  
Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights. Prerequisite: T-BUS 115.
- T-BUS 120 Accounting** 5 2 6  
Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: T-MAT 110.
- T-BUS 121 Accounting** 5 2 6  
Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: T-BUS 120.
- T-BUS 123 Business Finance** 3 0 3  
Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing. Prerequisite: None.
- T-BUS 124 Business Finance** 3 0 3  
Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. Prerequisite: T-BUS 123.
- T-BUS 183M Terminology and Vocabulary** 3 0 3  
To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices. Prerequisite: T-BUS 107. (T-BUS 183E—Elective for Executive Secretary)
- T-BUS 205 Advanced Typewriting** 2 3\* 3  
Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects

that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents. Prerequisite: T-BUS 104. Speed requirement, 50 words per minutes for five minutes.

**T-BUS 206E Dictation and Transcription** 3 2 4

Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material. Prerequisite: T-BUS 108.

**BUS 206M Dictation and Transcription**  
(Medical) (4)

Develops the skills of taking dictation and transcribing materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Prerequisite: T-BUS 108.

**T-BUS 207E Dictation and Transcription** 3 2 4

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minutes required for five minutes on new material. Prerequisite: T-BUS 206E

**BUS 207M Dictation and Transcription**  
(Medical) (4)

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business, technical, and professional offices. Prerequisite: T-BUS 206.

**T-BUS 208E Dictation and Transcription** 3 2 4

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minutes required for five minutes on new materials. Prerequisite: T-BUS 207.

**BUS 208M Dictation and Transcription**  
(Medical) (4)

Principally a speed-building course, covering materials appropriate to the course of study, with emphasis on neatness as well as accuracy. Prerequisite: T-BUS 207.

**T-BUS 211 Office Machines** 2 2 3

Instruction in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines. Prerequisite: T-BUS 110.

**T-BUS 213 Office Practice** 3 2 4

Design to acquaint the student with the responsibilities encountered in a general office. Emphasis on improving work habits and procedures, and developing skills and knowledge in the general clerical field. Prerequisite: None.

**T-BUS 214 Secretarial Procedures** 3 2 4

Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims. Prerequisite: None.

**T-BUS 215M Office Application (Elective) 6 0 6**

During the sixth quarter only, students are assigned to work in a business, technical or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study. Prerequisite: T-BUS 214, T-BUS 205, T-BUS 208, T-BUS 211.

**T-BUS 215E Office Application (Elective) 6 0 6**

During the sixth quarter only, students are assigned to work in a business, technical or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study. Prerequisite: T-BUS 214, T-BUS 205, T-BUS 208, T-BUS 211.

**T-BUS 217 Business Law (Elective) 3 0 3**

A study of the powers, policies, methods, and procedures used by the various federal, state and local administrative agencies in promoting and regulating business enterprises. It includes a consideration of the constitutional and statutory limitations on these bodies and judicial review of administrative action. Prerequisite: T-BUS 116.

**T-BUS 219 Credit Procedures and Problems (Elective) 3 0 3**

Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included. Prerequisite: T-BUS 120.

**T-BUS 229 Taxes 3 2 4**

Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance. Prerequisite: T-BUS 121.

**T-BUS 232 Sales Development 3 0 3**

A study of retail, wholesale and specialty selling. Emphasis is placed up mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required. Prerequisite: None.

**T-BUS 233 Personnel Management (Elective) 3 0 3**

Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, remuneration, labor relations, fringe benefits and security. Prerequisite: None.

**T-BUS 235 Business Management 3 0 3**

Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements. Prerequisite: None.

**T-BUS 237 Wholesaling (Elective) 3 0 3**

The development of wholesaling; present day trends in the United States. A study of the functions of wholesaling. Prerequisite: None.

**T-BUS 239 Marketing 5 0 5**

A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process. Prerequisite: None.

**T-BUS 241 Sales Promotion Management (Elective) 3 0 3**

Telescope and activities of sales promotion with emphasis on the coordination of advertising, display, special events, and publicity, external

and internal methods of promoting business budgeting, planning, and implementing the plan. Prerequisites: T-BUS 232, T-BUS 243.

**T-BUS 243 Advertising** 3 2 4

The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media. Prerequisite: None.

**T-BUS 245 Retailing (Elective)** 3 0 3

A study of the role of retailing in the economy, including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends. Prerequisite: None.

**T-BUS 247 Business Insurance (Elective)** 3 0 3

A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included. Prerequisite: None.

**T-BUS 255 Interpreting Accounting Records (Elective)** 3 0 3

Designed to aid the student in developing a "use understanding" of accounting records, reports and financial statements. Interpretation, analysis, and utilization of accounting statements. Prerequisite: T-BUS 121.

**T-BUS 266 Budget and Record Keeping (Elective)** 3 0 3

The basic principles, methods, and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record keeping in order to evaluate the effectiveness of budget planning. Prerequisite: T-BUS 121.

**T-BUS 271 Office Management** 3 0 3

Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems. Prerequisite: None.

**T-BUS 272 Principles of Supervision** 3 0 3

Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed. Prerequisite: None.

**BUS 284M Terminology and Vocabulary (Medical) (3)**

Greater emphasis on an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in a professional office. Prerequisite: T-BUS 383.

**BUS 1101 Cost Records & Cost Estimates** 2 0 2

Estimate of cost (materials, labor, overhead, etc.). Materials cost deals with price and grade, cost of delivery and storage, and percent utilization. Labor cost studies deal with such factors as time required, hourly rate, quantities produced, turnover and cost of training. Overhead costs are studied over specific periods of time with advantages and limitations of prorating overhead items of cost.

**BUS 1103 Small Business Operations** 3 0 3  
 An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations. Prerequisite: None.

**BUS 1105 Industrial Organizations** 3 0 3  
 Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost. Prerequisite: None.

**BUS 1111 Collecting & Reporting Information** 2 2 3  
 This course deals with the development of methods of collecting different types of data and information needed in the furniture industry for better production control, cost estimates, and cost analysis. Emphasis will be given to accurate collections of data and methods of presenting it neatly and effectively.

## CABINET MAKING

**CAB 1110 Case Goods Materials and Methods** 2 3 3  
 A comprehensive study of the materials and methods of the furniture making trade. Woods, metals, plastics, and other materials used in making of case goods. Basic woodworking operations and methods of joining of wood. Appliques and edgings, and hardware will be included. Prerequisite: None

## CARPENTRY

**CAR 1101 Carpentry** 3 15 8  
 A brief history of carpentry and present trends of the construction industry. The course will involve operation care and safe use of carpenters hand tools and power tools in cutting, shaping and joining construction materials used by the carpenter. Major topics of study will include theoretical and practical applications involving materials and methods of construction; building layout; preparation of site; footings and foundation wall construction including form construction and erection. Prerequisite: None.

**CAR 1102 Carpentry: Millwork and Cabinetmaking** 3 15 8  
 Cabinet making and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment will be emphasized in learning methods of construction of millwork and cabinetry. Practical applications will include measuring, layout and construction of: base and wall cabinets, built in desk, door and window frames; stairs; and interior and exterior cornice and trim. Materials and finishes will also be studied. Prerequisites: CAR 1101, DFT 1110.

**CAR 1103 Carpentry: Framing** 3 15 8  
 Instruction is given in the principles and practices of frame construction beginning with the foundation sills and including: floor joist; subfloor; wall studs; ceiling joist, rafters, bridging, bracing, sheathing and interior wall partition. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction, truss construction, and post and beam construction. Application and selection of sheath-

ing and roofing is included. Consideration is given to the coordination of carpentry work with installation of the mechanical equipment such as: electrical, air conditioning, heating, and plumbing. Prerequisites: CAR 1101, DFT 1111.

**CAR 1104 Carpentry: Finishing** 3 18 9

Exterior and interior trim and finish carpentry will complete the general carpentry program. Included will be materials and methods used in finishing carpentry such as: exterior cornice, door and window trim; interior flooring, door and window facing, moldings, and cornice construction; installation of hardware, and installation of built in equipment and cabinets. Prerequisites: CAR 1103, DFT 1111.

**CAR 1113 Carpentry: Estimating** 3 3 4

This is a practical course in quantity "take off" from prints of jobs performed by the carpenter. Figuring the quantities of materials needed and costs of building various components and structures. Prerequisites: DFT 1111, MAT 1112.

**CAR 1114 Building Codes** 3 0 3

A study is made of building codes and the minimum requirements for local, county, and state construction regulations. This involves safety, sanitation, mechanical equipment and materials. Also, a review will be made of the minimum property requirements of the Federal Housing Administration and the North Carolina State Code. Prerequisite: CAR 1103. Co-requisite: CAR 1104.

## CHEMISTRY

**T-CHM 101 Chemistry (Elective)** 4 2 5

Study of the physical and chemical properties of substances, chemical changes, elements, compounds, gases, chemical combinations, weights and measurements, theory of metals, acids, bases, salts, solvents, solutions, and emulsions. In addition, study of carbohydrates, electrochemistry, electrolytes, and electrolysis in their application of chemistry to industry. Prerequisite: T-MAT 101.

## COSMETOLOGY

**COS 1101 Introduction to Cosmetology** 5 1 66

Designed to give the student a background for the profession and an understanding of the laws and civic responsibilities involved.

**COS 1102 Bacteriology, Sanitation and First Aid** 5 2 77

A study of bacteriology to prevent the spread of disease in the shops, and instructions in sanitary measures and laws. Emphasis is placed on safety and methods of rendering first aid. Also instruction in health needs and habits of an individual.

**COS 1103 Shampoo and Rinse**

This course covers the theory and practical training necessary to develop the manipulative skill shampooing. Emphasis is placed on composition and application of various rinses.

**COS 1105 Finger Waving and Pin Curling** 1 9 110

A study of hair, use of comb, fingers, and waving lotion to produce a wave. The different styles of finger waving, pin curling, and roller curl are studied to enable the student to make application of finger waving and pin curling to various hair styles.

- COS 1106 Hair Shaping** 1 9 110  
Skill in the use of scissors and razor for shaping the hair is developed in this course. The student becomes familiar with various methods of cutting hair which may be applied to specific hair styling and permanent waving.
- COS 1107 Manicuring** 1 2 33  
The care of the hands and nails with emphasis on correct procedures, techniques, materials, and equipment used in giving a manicure. Also attention devoted to developing an understanding of the relationship between customer and operator.
- COS 1110 Permanent Waving—  
Cold and Heat Wave** 2 15 187  
This course is designed to provide a foundation for the practical art of permanent waving. Such topics as types of permanent wave, texture and elasticity of hair, and shaving of hair are included. Also the methods of permanent waving are taught.
- COS 1111 Hair Styling and Wig Care** 2 9 121  
This course deals with the fundamental principles of hair styling and wig care. Through study of the contour of the head and face a student learns to see the relationship of these features to various hair styles. Also extensive practice in the proper use of sculpture curls, brushing, and combing are included.
- COS 1112 Personality** 2 0 22  
Designed to develop a pleasing personality, charm, and poise necessary to every one in the beauty field.
- COS 1115 Tinting and Bleaching** 1 8 99  
A study of techniques and applications involved in giving hair tints and bleaches; reaction of chemicals to certain textures of hair; composition, merits, and limitations of softeners, developers, hair tints, and bleaches.
- COS 1116 Scalp Treatments** 1 2 33  
A study of the principles, techniques, materials, supplies and applications used in giving scalp treatments.
- COS 1118 Anatomy I** 3 2 55  
The structure and function of the bones, muscles, and nerves with particular emphasis upon their application of cosmetology.
- COS 1119 Anatomy II** 2 4 66  
A continuation of anatomy with additional emphasis on the structure and function of bones, muscles and nerves as applied to the work of the cosmetologist.
- COS 1120 Facials** 1 5 66  
Designed to aid in the undertaking of the principles, techniques, purpose, application and benefits of facial massage and cosmetic use. The various types of facials appropriate for different types of skin studied.
- COS 1121 Disorders of Skin,  
Nails and Hair** 5 3 88  
The cause, identification, and treatment of common skin disorders and scalp diseases.
- COS 1122 Electricity** 3 1 44  
Designed to acquaint the student to electricity in its different phases as applied to cosmetology. Such topics as wallplate, high frequency and electrodes are studied and discussed.

**COS 1123 Chemistry** 2 1 33  
 Designed to give the student an understanding of the basic principles of chemistry as they apply to the field of cosmetology. The major areas of work studied in this course are: fundamentals of chemistry, chemistry of soaps, hair preparations, nail preparations, deodorant preparations, creams and lotions, and facial preparations.

**COS 1124 Operational Management** 1 0 11  
 Designed to give the student an understanding of the principles relating to the operation of a beauty shop. Emphasis on equipment, finance, and management.

## DATA PROCESSING

**T-EDP 101 Functional Wiring Principles** 2 3 3  
 The fundamental principles of wiring necessary to perform basic machine functions of printing, punching, comparing and selection. A series of laboratory experiments support the theoretical aspects of this course. Prerequisite: None.

**T-EDP 102 Functional Wiring Principles** 2 3 3  
 Additional study of the fundamental principles of wiring necessary to perform basic machine functions of printing, punching, comparing and selection with emphasis on the accounting machine. A series of laboratory experiments support the theoretical aspects of this course. Prerequisite: T-EDP 101.

**T-EDP 104 Introduction to Data Processing System** 3 2 4  
 Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses. Prerequisite: None.

**T-EDP 106 Business Programming Languages** 2 4 4  
 The study of business processors and compiler languages. The student programs in such current applicable business languages as SPS II—DISK and COBOL. Prerequisite: T-EDP 104.

**T-EDP 108 Scientific Programming Languages** 2 4 4  
 The study of scientific compiler languages. The student programs in a current applicable scientific language, FORTRAN, with an introduction to ALGOL and GOTRAN. Prerequisite: T-EDP 104 and 106.

## DRAFTING

**T-DFT Technical Drafting** 0 6\* 2  
 The field of drafting is introduced as the student begins study of drawing principles and practices of print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced. Prerequisite: None

**T-DFT 102 Technical Drafting** 0 6\* 2  
 The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphical analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices for "details" and "working drawings," approved by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometrical objects. Prerequisite: T-DFT 101.

<b>T-DFT 103 Technical Drafting</b>	<b>0</b>	<b>6*</b>	<b>2</b>
Intersection and developments and their practical solutions. Where applicable, model solutions accompany the problems. The various techniques employed to produce and render isometric and oblique drawings, isometric, dimetric and trimetric projections, will be included. Prerequisite: T-DFT 102.			
<b>T-DFT 201 Technical Drafting</b>	<b>2</b>	<b>6*</b>	<b>4</b>
Applications and constructions of charts, graphs, and nomographs in engineering and technical data. Screw threads, springs, keys, rivets, piping, and welding symbols, methods of representing and specifying will be covered. Basic mechanisms of motion transfer, gears and cams, will be studied and drawn with emphasis on methods of specifying, calculating, dimensions, and delineating. Prerequisite: T-DFT 103.			
<b>T-DFT 204 Descriptive Geometry</b>	<b>2</b>	<b>4</b>	<b>4</b>
Graphic analysis of space problems involving points, lines, planes, connectors, and a combination of these. Practical design problems will be stressed with analytical verification where applicable. Visualization shall be stressed on every problem. Prerequisites: T-DFT 102, T-MAT 102.			
<b>T-DFT 205 Design Drafting I</b>	<b>2</b>	<b>6*</b>	<b>4</b>
Basic design is introduced in the study of motion transfer mechanisms as they relate to power trains. Principles of design sketching, design drawing, layout drafting, detailing from layouts, production drawings and simplified drafting practices constitute areas of study. Types of methods of specifying materials and workmanship are an integral part of the course. Prerequisites: T-DFT 204, T-MAT 102, T-PHY 102.			
<b>T-DFT 206 Design Drafting II</b>	<b>2</b>	<b>6*</b>	<b>4</b>
Research to solve a problem in design by consulting various manuals, periodicals, and through laboratory experiments. A written technical report, preliminary design sketches, layout drawings, detail drawings, assembly and sub-assembly drawings, pictorial drawings, exploded pictorial assembly, patent drawings and specifications are required as a part of the problem. Prerequisites: T-DFT 205, T-DFT 210.			
<b>T-DFT 211 Mechanisms</b>	<b>3</b>	<b>2</b>	<b>4</b>
Mathematical and drafting room solutions of problems involving the principles of machine elements. Study of motions of linkages, velocities and acceleration of points within a link mechanism; layout methods for designing cam, belts, pulleys, gears and gear trains. Prerequisites: T-DFT 201 and 204, T-MAT 103, T-PHY 106.			
<b>T-DFT 212 Jig and Fixture Design (Elective)</b>	<b>2</b>	<b>6*</b>	<b>4</b>
Commercial standards, principles, practices and tools of jig and fixture design. Individual project and design work to acquaint students with the types of jigs and fixtures and their design. Prerequisites: T-DFT 205, T-DFT 211.			
<b>DFT 1101 Schematics &amp; Diagrams:</b>			
<b>Power Mechanics</b>	<b>0</b>	<b>3</b>	<b>1</b>
Interpretation and reading of blueprints. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes. Prerequisite: None.			
<b>DFT 1104 Blueprint Reading: Mechanical</b>	<b>0</b>	<b>3</b>	<b>1</b>
Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, dimensioning procedures and notes. Prerequisite: None.			

**DFT 1105 Blueprint Reading: Mechanical** 0 3 1

Further practice in interpretation of blueprints as they are used in Industry; study of prints supplied by industry; making plans of operations; introduction to drafting room procedures; sketching as a means of passing on ideas, information and processes. Prerequisite: DFT 1104.

**DFT 1106 Blueprint Reading: Mechanical** 0 3 1

Advanced blueprint reading and sketching as related to detail and assembly drawings used in machine shops. The interpretation of drawings of complex parts and mechanisms for features of fabrications, construction and assembly. Prerequisite: DFT 1105.

**DFT 1110 Blueprint Reading: Building Trade** 0 3 1

Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.

**DFT 1111 Blueprint Reading & Sketching** 0 3 1

Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevations, chimneys, fireplaces, arches and cavity wall construction. Development of proficiency in making three view and pictorial sketches. Prerequisite: DFT 1110.

**DFT 1112 Blueprint Reading & Sketching** 0 3 1

Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings will be studied with emphasis on the plot plan, floor plan, basement and/or foundation plan, walls and various detailed drawings of masonry work. Prerequisite: DFT 1111.

**DFT 1113 Blueprint Readings: Electrical** 0 3 1

Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course. Prerequisite: DFT 1110.

**DFT 1117 Blueprint Reading: Welding** 0 3 1

A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications. Prerequisite: DFT 1104.

**DFT 1118 Pattern Development and Sketching** 0 3 1

Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates. Prerequisite: None.

**DFT 1121 Drafting** 3 12 7

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time. Prerequisite: None.

**DFT 1121-1 Drafting (Part Time)** 2 5 4

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-

stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time. Prerequisite: None.

<b>DFT 1121-2 Drafting (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
Continuation of Drafting 1121-1.			

<b>DFT 1122 Drafting</b>	<b>3</b>	<b>6</b>	<b>5</b>
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The trainee will study simple and successive revolutions and their applications to practical problems. Sections and conventions will be studied and both detail and assembly sections will be drawn. Intersections and developments will be studied by relating the drawing to the sheet metal trades. Models of the assigned drawings will be made from construction paper, cardboard, or similar materials as a proof of the solution to the problems drawn.

Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced and dimensioning and sectioning of oblique and axonometric pictorials will be done. Prerequisite: DFT 1121.

<b>DFT 1125. Descriptive Geometry</b>	<b>2</b>	<b>3</b>	<b>3</b>
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Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Where applicable, each graphical solution shall be accompanied by the analytical solution. Prerequisite: DFT 1121.

<b>DFT 1130 Drafting (Sketching)</b>	<b>2</b>	<b>5</b>	<b>4</b>
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<b>DFT 1131 Mechanical Drafting</b>	<b>3</b>	<b>12</b>	<b>7</b>
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An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasteners: keys, rivets, springs, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with the study of basic mechanisms of motion transfer; gears, cams, power trains, pulleys, belting and methods of specifying and calculating dimensions will be studied. Drawings will be made involving these mechanisms. Prerequisite: DFT 1122.

<b>DFT 1131-1 Mechanical Drafting (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
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<b>DFT 1131-2 Mechanical Drafting (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
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<b>DFT 1132 Mechanical Drafting</b>	<b>3</b>	<b>12</b>	<b>7</b>
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Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a tool, jig, fixture or simple machine and learn principles of design, handbook and manual usage. Prerequisite: DFT 1131.

<b>DFT 1132-1 Mechanical Drafting (Part Time)</b>	<b>1</b>	<b>5</b>	<b>3</b>
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<b>DFT 1132-2 Mechanical Drafting (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
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<b>DFT 1135 Furniture Drafting</b>	3	12	7
An introduction to furniture drafting. Anatomical relationships influencing furniture construction and design. Furniture parts. Scale drawings and full-size drawings will be made. Dimensioning practices and notes will be studied. Prerequisite: DFT 1122.			
<b>DFT 1136 Furniture Drafting</b>	3	15	8
The "working drawing" will be studied and a complete set of drawings will be made of a group of furniture. Related architectural considerations will be included. Noted and materials list will accompany the set of drawings. Prerequisites: DFT 1135, UPH 111, CAB 1110.			
<b>DFT 1137 Furniture Specifications</b>	3	0	3
Furniture specifications and billing of materials will be studied. Materials, fabrication, workmanship, finishes, crating and shipping instructions will be included. Prerequisites: DFT 1135, UPH 1111, CAB 1110.			
<b>DFT 1138 Furniture Styling and Decoration</b>	3	0	3
A study of the periods and styles of furniture and of the factors which influenced their development. Methods of styling and decorating will be included along with basic principles of design. Prerequisites: UPH 1111, CAB 1110.			

## ECONOMICS

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-ECO 102 Economics</b>	3	0	3
The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large. Prerequisite: None.			
<b>T-ECO 104 Economics</b>	3	0	3
Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems. Prerequisite: T-ECO 102.			
<b>T-ECO 108 Consumer Economics (Elective)</b>	3	0	3
Designed to help the student use his resources of time, energy, and money to get the most out of life. It gives the student an opportunity to build useful skills in buying, managing his finances, increasing his resources, and to understand better the economy in which he lives. Prerequisite: None.			

## ELECTRICAL

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-ELC 201 Electrical Machinery (Elective)</b>	3	0	3
A course in the basic understanding and application of electricity to modern industrial machinery. Included is a study of direct current motors, motor controls and protecting devices, transformers, and the industrial applications of this equipment. Prerequisite: T-PHY 103.			

<b>ELC 1112 Direct and Alternating Current</b>	<b>5</b>	<b>12</b>	<b>9</b>
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A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analyses of direct current circuits by Ohm's Law and Kirkchhoff's Law. A study of the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits. Prerequisite: None.

<b>ELC 1112-1 Direct and Alternating Currents (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
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<b>ELC 1112-2 Direct and Alternating Currents (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
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<b>ELC 1113 Alternating Current and Direct Current and Machines and Controls</b>	<b>5</b>	<b>12</b>	<b>9</b>
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Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances such as: thermostats, times, or sequencing switches. Prerequisites: ELC 1112, MAT 1115.

<b>ELC 1113-1 Alternating Current and Direct Current Machines and Controls (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
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<b>ELC 1113-2 Alternating Current and Direct Current Machines and Controls (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
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<b>ELC 1121 Electrical Machines and Controls</b>	<b>2</b>	<b>2</b>	<b>3</b>
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An introduction to the construction, operation and utilization of direct current and alternating current machines. Familiarization with the various types of machine control devices. Prerequisite: None.

<b>ELC 1122 Electrical Maintenance</b>	<b>3</b>	<b>6</b>	<b>5</b>
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A study is made of those parts of the electrical code which affect the work of the industrial maintenance electrician. Practical experience is provided in wiring, installing and connecting the various types of services for lighting, heating and power installations. Training is provided in troubleshooting in the identification and testing of circuits, in making mechanical adjustments and related maintenance operations. Schematic diagrams are used showing the plan of operation for each system. Prerequisite:

<b>ELC 1124 Residential Wiring</b>	<b>5</b>	<b>9</b>	<b>8</b>
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Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups. Prerequisite: ELC 1113, DFT 1110.

<b>ELC 1125 Commercial and Industrial Wiring</b>	<b>5</b>	<b>12</b>	<b>9</b>
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Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems. Prerequisites: ELN 1118, ELC 1124.

<b>ELC 1125-1</b>	<b>Commercial and Industrial Wiring (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
<b>ELC 1125-2</b>	<b>Commercial and Industrial Wiring (Part Time)</b>	<b>2</b>	<b>6</b>	<b>4</b>

ELECTRONICS

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-ELN 201 Industrial Controls (Elective)</b>	<b>3</b>	<b>2</b>	<b>4</b>
Industrial controls is the study of modern methods of controlling machinery by electronic circuitry. Machinery controls and electronic that automatically operate machines will be studied. Types of motors, generators, control signals and devices, thyratrons, gates, switches, and servomechanism circuits are major areas of study. Prerequisite: T-PHY 103.			
<b>ELN 1118 Industrial Electronics</b>	<b>3</b>	<b>6</b>	<b>5</b>
Basic theory, operating characteristics, and application of vacuum tubes such as: diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes, and other basic applications. Prerequisite: ELC 113.			
<b>ELN 1119 Industrial Electronics</b>	<b>3</b>	<b>6</b>	<b>5</b>
Basic industrial electronic systems such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyatron tubes, and other basic types and systems commonly found in most industries. Prerequisite: ELN 1118.			

ENGLISH

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-ENG 101 Grammar</b>	<b>3</b>	<b>0</b>	<b>3</b>
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: None			

SECOND QUARTER

<b>T-ENG 102 Composition</b>	<b>3</b>	<b>0</b>	<b>3</b>
Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: T-ENG 101.			

THIRD QUARTER

<b>T-ENG 103 Report Writing</b>	<b>3</b>	<b>0</b>	<b>3</b>
The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-			

length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum. Prerequisite: T-ENG 102.

**ENG 204 Oral Communication** 3 0 3  
A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: Grammar.

**T-ENG 206 Business Communication** 3 0 3  
Develops skills in techniques in writing business communications. Emphasis is placed on writing action—getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry. Prerequisite: Report Writing

**ENG 1101 Reading Improvement** 2 0 2 22  
Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units. Prerequisite: None.

**ENG 1102 Communication Skills** 3 0 3 33  
Designed to promote effective communication through correct language usage in speaking and writing. Prerequisite: ENG 1101.

**T-ENG Reading Improvement (Elective)** 2 0 2  
A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Reading faults of the individual are analyzed for improvement, and principles of vocabulary building are stressed. Prerequisite: None.

**T-ENG 201 American Literature** 3 0 3  
A general survey of American Literature between 1607 and 1870. The chief writers of this period and their writings are assigned and discussed with an aim to develop some appreciation of the growth of American thought as revealed in the literature of the period. Prerequisite:

**T-ENG 202 American Literature** 3 0 3  
A continuation of the study of American Literature from 1870 to the present. Prerequisite:

FURNITURE

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>FURN 1103 Construction and Billing</b>	2	6	4
Emphasis on construction for satisfactory performance in service, adequate strength and rigidity, and low cost. Once construction has been determined, students make accurate bills of material and other manufacturing information for the shop.			

<b>FURN 1104 Characteristics of Woods</b>	<b>1</b>	<b>0</b>	<b>1</b>
Structure (very elementary only). Wood-moisture relations. Shrink, swell and warp. Effect of grain on strength and related properties. Machineability.			
<b>FURN 1105 Glues</b>	<b>1</b>	<b>0</b>	<b>1</b>
Types of glues with operating advantages and disadvantages. Factors affecting strength of glue joints. Time factors, temperature factors and pressure factors in using glue. Gap filling characteristics. Effect of grain orientation.			
<b>FURN 1106 Furniture Sanding</b>	<b>1</b>	<b>3</b>	<b>2</b>
<b>FURN 1107 Wood Finishes</b>	<b>1</b>	<b>3</b>	<b>2</b>
Preparing surface for finish. Process for color, filling of pores, sealing, sanding, body coats, rubbing. Cure by drying out solvents, by oxidation, by polymerization. Time, temperature, and air circulation requirements for various finishes. Causes and cures of defects in finishes.			
<b>FURN 1108 Furniture Manufacturing and Processing Equipment I</b>	<b>1</b>	<b>4</b>	<b>3</b>
This course deals with the setting up, operating procedures, capacities, and safety in working with various pieces of furniture equipment tenoner, knife grinding machine, and sanding equipment.			
<b>FURN 1109 Furniture Manufacturing and Processing Equipment II</b>	<b>1</b>	<b>4</b>	<b>3</b>
This is a continuation of Furniture Manufacturing and Processing Equipment I and will deal with more complicated types of furniture equipment currently in use in the Lenoir area.			
<b>FURN 1112 Routing and Process Sequences</b>	<b>1</b>	<b>3</b>	<b>2</b>
Analysis of proper sequence of operations. Use of such charts as are helpful. Study of temperature and time elements as are necessary for satisfactory processing. Studies of alternate processes.			
<b>FURN 1113 Characteristics of Woods</b>	<b>2</b>	<b>0</b>	<b>2</b>
Structure (very elementary only). Wood-moisture relations. Shrink, swell and warp. Effect of grain on strength and related properties. Machineability.			

INDUSTRIAL SCIENCE

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-ISC 201 Industrial Organization and Management (Elective)</b>	<b>3</b>	<b>0</b>	<b>3</b>
Organizational structure for industrial management; operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting and markets, selection and layout of physical facilities; selection, training and supervision of personnel as found in typical industrial organizations. Prerequisite: None.			
<b>T-ISC 202 Quality Control</b>	<b>3</b>	<b>2</b>	<b>4</b>
Principles and techniques of quality control and cost saving. Organization and procedure for efficient quality control. Functions, responsibilities, structure, costs, reports, records, personnel and vendor-customer relationships in quality control. Sampling inspections, process control and tests for significance. Prerequisite: None.			

**T-ISC 203 Motion Study** 3 2 4  
Types of methods studies and their applications. Process charts, analysis sheets, time study, work simplification, skill and effort rating. Prerequisite: None.

**T-ISC 204 Value Analysis (Elective)** 3 0 3  
The modern concept in the control of manufacturing production. This course will provide the students an opportunity to study a production system with the specific purpose of identifying unnecessary costs. The objective of the concepts and techniques of value analysis is to make possible a degree of effectiveness in identifying and removing unnecessary cost by the use of sound decisions through a common sense approach. Prerequisite: None.

**T-ISC 209 Plant Layout (Elective)** 3 2 4  
A practical study of factory planning with emphasis on the most efficient arrangements of work areas to achieve lower manufacturing costs. Layouts for small and medium-sized plants, layout fundamentals, selection of production equipment and materials handling equipment. Effective management of men, money and materials in a manufacturing operation. Prerequisites: T-MEC 201, T-DFT 102.

**T-ISC 214 Product Development** 3 0 3  
This course of study is to familiarize the student with product development as it relates to the complete manufacturing organization. The evolution from original idea to retailer involving sales, design and engineering, cost, plant production, shipping, and outside agencies. Prerequisite: None.

**ISC 1001 Industrial Safety** 3 0 3 33  
A study of the overall picture of the accident toll for the nation's population. It is designed to establish safe work habits in performing the occupation. Principles of accident prevention; injury sources and causes; accident costs; job safety analysis; accident investigation; methods of promoting safe practice, safety education and training; first aid; lifting—manually and mechanically; and fire prevention and protection are some of the topics discussed. Prerequisite: None.

**ISC 1110 Production Control** 3 2 4 55  
Production planning, dispatching, progress reporting, adjusting and re-planning systems and charts which help effectively control production will be developed and studied. Material wastes controls, labor controls, indirect labor controls, and overhead controls as they relate to production control. Prerequisites: TEX 1108, TEX 1120, TEX 1110.

**ISC 1121 Cost Records and Cost Estimates** 3 0 3 33  
Estimate of cost (materials, labor, overhead, etc.). Materials cost deals with price and grade, cost of delivery and storage, and percent utilization. Labor cost studies deal with such factors as time required, hourly rate, quantities produced, turnover and cost of training. Overhead costs are studied over specific periods of time with advantages and limitations of prorating overhead items of cost. Prerequisites: TEX 1108, TEX 1120, TEX 1110.

**ISC 1123 Work Measurement** 3 2 4 55  
The basic study of the principles of work simplification, motion study fundamentals, and time study techniques. The use of predetermined time schedules and the use of the stop watch as they apply to ask performance of the operator in his work performance. The study of flow diagrams and methods evaluation for production purposes. Prerequisites: TEX 1108, TEX 1120, TEX 1110.

**ISC 1125 Supervisory Responsibility**      3                      0                      3                      33  
This course deals with such topics as fundamentals of supervision, relationships on the job, human relations, performance and job evaluation, the art of motivating people, and effective communications. Prerequisite: PSY 1101.

**ISC 1102 Industrial Organization & Management**      3                      0                      3  
Organizational structure for industrial management; operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting and markets, selection and layout of physical facilities; selection, training and supervision of personnel as found in typical industrial organizations. Prerequisite: None.

**ISC 1103 Production Control**                                      1                      3                      2  
Production planning, dispatching, progress reporting, adjusting and replanning systems and charts which help effectively control production will be developed and studied. Material wastes controls, labor controls, indirect labor controls, and overhead controls as they relate to production control will be dealt with.

**ICS 1110F Time Study & Time Standards**                      2                      2                      3  
Primary emphasis on use of stop watch. Breaking down repetitive operation into elements. Timing the elements. Work readings. Operator performance rating. Avoidable delays. Allowances for unavoidable delays. Setting time standards. Timing delays. Technique of work sampling. Bench marks for "normal work pace. Motion study such as is needed to intelligently use predetermined time standards. Practice in building up standard times for specific operations using tables of predetermined times for the elements of the operation.

**ISC 1113 Quality Control**    3                      0                      3  
Setting quality standards for customer acceptance. Final inspection to police these standards. Prior inspections and specifications to achieve final quality standard at minimum cost. Dimensions, tolerances, gages and other techniques to control dimensions. Qualities other than dimensions are more intangible. How to set standards and police performance in such areas. Receiving inspection, in process inspection, sampling.

**ISC 1114 Supervisory Responsibilities**                                      3                      0                      3  
This course deals with such topics as fundamentals of supervision, relationships on the job, human relations, performance and job evaluation, the art of motivating people, and effective communications.

**LIBRARY**

Course Title	Hours Per Week		Quarter Hours
	Class	Lab.	
<b>T-LIB 101 Introduction to Library Services</b>			
Short history of libraries and library service. Introduction to card catalogue, book catalogue, classification systems with emphasis on Dewey Decimal system, and shelf arrangement. Explanation of departmental organization and inter-relationship of departments. Prerequisite: None.			
<b>T-LIB 102 Book Selection Tool and Order Procedure</b>	3	2	4
Principles of book selection with emphasis on the sources of guidance in book selection, the evaluation of these sources which include book review, book list, trade bibliographies and publishers' annotations. The policy and practice of buying books and techniques of ordering. Prerequisite:			

**T-LIB 103 Library Reference** 3 2 4  
 Study of general encyclopedias, special reference works, year books, dictionaries, and other basic sources used in reference work. Also this course includes practice in the preparation of simple bibliographies, emphasizing correct form. Prerequisite:

**T-LIB 201 Introduction to Classification and Cataloging** 3 2 4  
 An introduction to classification systems with particular emphasis on the Dewey Decimal Classification. The purpose is to give an understanding of the classification numbers, not to make classifiers of the students. Study of the principles of dictionary cataloging. Practice in dictionary cataloging plus practice in assigning subject headings. Prerequisite:

**T-LIB 202 Library Circulation Routines** 3 0 3  
 A study of some routine circulation procedures, including circulation of books, pamphlets, and other materials. Techniques of physical inventory using shelf-list control. Prerequisite:

**T-LIB 203 Library Practice** 0 6 3  
 Continuation of Library Science Practice. Six hours per week of practice work in libraries. Prerequisite:

**T-LIB 204 Library Practice** 0 6 3  
 Student will be placed in an approved library for 6 hours per week of supervised learning experiences under a professional librarian, putting into practice the various skills learned. Prerequisite:

**T-AUDV 101 Audio Visual Materials**  
 An introduction to the use and care of a variety of audiovisual aids, and to acquire a basic knowledge of graphics. Emphasis on slides, photocopying, transparencies, and displays. Prerequisite:

## MATHEMATICS

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-MAT 101 Technical Mathematics</b>	5	0	5
The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed. Prerequisite: Satisfactory evidence that admission requirements have been met.			
<b>T-MAT 102 Technical Mathematics</b>	5	0	5
A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binominal expansion, complex numbers, solution of oblique triangles and graphs of the trigonometric functions are studied in depth. Prerequisite: T-MAT 101.			
<b>T-MAT 103 Technical Mathematics</b>	5	0	5
The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Applications of these concepts to practical situations are stressed. Prerequisite: T-MAT 102.			

**T-MAT Bollean Algebra** 3 0 3  
Principles of Bollean Algebra and its contribution to digital devices and data processing. Prerequisite: None.

**T-MAT Numbering Systems** 2 0 2  
A cursory treatment of the base-ten numbering system; functional introduction to numbering systems with bases other than 10, transformation from one system to another; fundamental operation in systems other than the decimal; a detailed study of the binary system in relation to machine calculations.

**T-MAT 110 Business Mathematics** 5 0 5  
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.

**MAT 1101 Fundamentals of Mathematics** 5 0 5  
Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth. Prerequisite: None.

**MAT 1102 Algebra** 5 0 5  
Basic concepts and operations of algebra: historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition and subtraction, graphing; exponents, logarithms, tables and interpolation. Prerequisite: None.

**MAT 1103 Geometry** 3 0 3  
Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations. Prerequisite: None.

**MAT 1104 Trigonometry** 3 0 3  
Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations. All topics are applied to practical problems. Prerequisite: MAT 1102, MAT 1103.

**MAT 1112 Building Trades Mathematics** 3 0 3  
Practical problems dealing with volumes, weights, ratios; mensuration; and basic estimating practices for building materials. Prerequisite: MAT 1101.

**MAT 1115 Electrical Math** 5 0 5  
A study of fundamental concepts of algebra; basic operations of addition, subtraction, multiplication, and division; solution of first order equations, use of letters and signs, grouping, factoring, exponents, ratios, and proportions; solution of equations, algebraically and graphically; a study of logarithms and use of tables; an introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current. Prerequisite: None.

**MAT 1123 Machinist Mathematics** 3 0 3  
Introduces gear ratio, lead screw and indexing problems with emphasis on application to the machine shop. Practical applications and problems

furnish the trainee with experience in geometric propositions and trigonometric relations to shop problems; concludes with an introduction to compound angle problems. Prerequisite: MAT 1104.

## MECHANICAL

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-MEC 101 Machine Processes</b>	0	6*	2
An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming. Prerequisite: None.			
<b>T-MEC 102 Machine Processes</b>	0	6*	2
Advanced operations on lathe, drilling, boring and reaming machines. Milling machine theory and practice. Thorough study of the types of milling machines, cutters, jig and fixture devices, and the accessories used in a modern industrial plant. Safety in the operational shop is stressed. Prerequisite T-MEC 101.			
<b>T-MEC 103 Machine Processes</b>	0	6*	2
Modern machine tools of industry. Theory and practice with shaper, slotter, planer, turret lathe, screw machine, grinding and finishing machines. Gear design and the processes of gear manufacturing. Prerequisite: T-MEC 102.			
<b>T-MEC 201 Machine Processes</b>	2	6*	4
Newer concepts of work handling and automatic machining process. Chipless production and new techniques in metal forming. Analysis of high-energy forming, ultrasonic machining, electrolytic metal removal, chemical milling, numerical controls and simplified building block numerical control systems. Prerequisite: T-MEC 103.			
<b>T-MEC 205 Strength of Materials</b>	3	2	4
Study of principles and analysis of stresses which occur within machine and structure elements subjected to various types of loads such as static, impact, varying and dynamic. Analyses of these stresses are made as applied to thin-walled cylinders and spheres, riveted and welded joints, beams, columns and machine components. Prerequisites: T-PHY 106, T-MAT 103.			
<b>T-MEC 210 Physical Metallurgy</b>	3	3*	4
Introductory course in metallurgy, a basic study of the properties of metals and alloys. Analysis of the structure of metals and alloys, atomic structure, nuclear structure, and nuclear reactions. Solid (crystalline) structures, methods of designating crystal planes, liquid and vapor phases, phase diagrams, and alloy systems. Prerequisite: T-PHY 101.			
<b>T-MEC 211 Physical Metallurgy</b>	3	3*	4
Properties of metals and alloys, the reactions of metals, diffusion, carburizing, metal bonding and homogenization, recrystallization and grain growth, age hardening, nitriding, internal oxidation, heat treatment of steel, laboratory experiments and demonstrations. Prerequisite: T-MEC 210.			
<b>T-MEC 212 Practical Automation (Elective)</b>	3	2	4
A comprehensive study of automation as it is interpreted and practiced			

by American industry of today. The fundamentals of automation and its effects in industrial productivity, labor supply and demand, equipment and processes. Students will solve problems encountered while installing an automated system. Prerequisite: None.

**T-MEC 213 Production Planning** 3 3\* 4  
Day-to-day plant direction; forecasting, product planning and control, scheduling, dispatching, routing, and inventory control. Case histories are discussed in the classroom, and courses of corrective action are developed. Drafting room layouts for planning and control. Prerequisite: T-DFT 102. Corequisite: T-MEC 201.

**T-MEC 214 Tool Engineering (Elective)** 3 0 3  
An introduction to the problems of tool engineering with emphasis on planning the processes of production, designing and developing the necessary tools, and utilizing available manufacturing facilities; practical analysis and comparison of the use and cost of tools, jigs and fixtures, dies, molds, and gauges as they are utilized in our modern day manufacturing and production methods. Prerequisites: T-DFT 102, T-MEC 201.

**T-MEC 235 Hydraulics and Pneumatics** 3 3\* 4  
The basic theories of hydraulic and pneumatic systems. Combinations of systems in various circuits. Basic designs and functions of circuits and motors, controls, electrohydraulic servomechanisms, plumbing, filtration, accumulators and reservoirs. Prerequisite: T-PHY 102.

**T-MEC 237 Control Systems (Elective)** 2 4 4  
Hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance, accuracy, applications and their utilization in industrial processes. Prerequisites: T-PHY 102, T-ELC 201.

**MEC 1101 Machine Shop Theory and Practice** 3 12 7  
An introduction to the machinist trade and the potential it holds for craftsman. Deals primarily with the identification, care and use of basic hand tools and precision measuring instruments. Elementary layout procedures and processes of lathe, drill press, grinding (off-hand) and milling machines will be introduced both in theory and practice. Prerequisite: None.

**MEC 1102 Machine Shop Theory and Practice** 3 12 7  
Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine shaper. The student will be introduced to the basic operations on the cylindrical grinder and will select projects encompassing all the operations, tools and procedures thus far used and those to be stressed throughout the course. Prerequisite: MEC 1101.

**MEC 1103 Machine Shop Theory and Practice** 3 12 7  
Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, and worm gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder. Prerequisites: MEC 1102.

**MEC 1104 Machine Shop Theory and Practice** 3 12 7  
Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc.

Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishing of good work habits and attitudes acceptable to the industry. Prerequisites: MEC 1103.

**MEC                    General Maintenance and Repair                    3                    6                    5**  
To acquaint the student with the basic fundamentals of installation, maintenance and repair of machine tools. Emphasis is placed on machine maintenance and accuracy. Miscellaneous hydraulic, pneumatic and lubrication devices are installed and maintained. Methods of rigging and machine installation including location, leveling and fastening are covered. The use of precision measuring tools and checking for accuracy, squareness and correct center line distances is stressed for pre-start inspection. Pre-requisite:

**MEC 1113 Shop Processes                    2                    3                    3**  
Study of practices used in metalworking shops: introduction to how materials can be utilized, and to the processes of shaping, forming, and fabricating of metals. Demonstration of the metalworking lathes, grinders, drills, milling machines, shapers, planers, saws, broachers, gear cutting machines and finishing machines. A study of the capabilities of these machines. Prerequisite: None

**MEC 1114 Shop Processes                    2                    3                    3**  
Comparison of the unit-production and mass-production systems. Casting, forging and allied processes, welding and sheet metal working processes are demonstrated and discussed. Mass-Production methods are studied in relationship to precision dimensional control. Prerequisite: MEC 1113.

**MEC 1115 Treatment of Ferrous Metals                    2                    3                    3**  
Investigates the properties of ferrous metals and tests to determine their uses. Instructions will include some chemical metallurgy to provide a background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous metals, producing iron and steel, theory of alloys, shaping and forming, heat treatments for steel, surface treatments, alloy of special steel, classification of steels, and cast iron will be topic for study. Prerequisite: None

**PHYSICS**

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-PHY 101 Physics: Properties of Matter</b>	<b>3</b>	<b>2</b>	<b>4</b>
A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course. Prerequisite: None.			
<b>T-PHY 102 Physics: Work, Energy, Power</b>	<b>3</b>	<b>2</b>	<b>4</b>
The major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, forces, center of gravity, and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas. Prerequisites: T-PHY 101, T-MAT 101.			
<b>T-PHY 103 Physics: Electricity</b>	<b>3</b>	<b>2</b>	<b>4</b>
Basic theories of electricity, types of electricity, methods of production, and transmission and transforming of electricity. Electron theory, electricity by chemical action, electricity by friction, electricity by magnetism,			

induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of the course. Prerequisites: T-PHY 101, T-MAT 101.

<b>T-PHY 106 Applied Mechanics</b>	<b>5</b>	<b>0</b>	<b>5</b>
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Concepts and principles of statics and dynamics. Parallel concurrent and noncurrent force systems in coplanar and noncoplanar situations. Concepts of centroids and center of gravity, moments of inertia, fundamentals of kinetics, and kinematics of velocity and motion. Prerequisites: T-MAT 103, T-PHY 102.

<b>PHY 1101 Applied Science</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>55</b>
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An introduction to physical principles and their application in industry. Topics in this course include measurement; properties of solids, liquids, and gases; basic electrical principles. Prerequisite: MAT 1101.

<b>PHY 1102 Applied Science</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>55</b>
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The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry, and principles of force, motion, work, energy, and power. Prerequisite: PHY 1101.

**POLITICAL SCIENCE**

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-POL 201 United States Government (Elective)</b>	<b>3</b>	<b>0</b>	<b>3</b>
A study of government with emphasis on basic concepts, structure, powers, procedures and problems. Prerequisite: None.			

**PRACTICAL NURSING EDUCATION**

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>NUR 1101 Basic Science</b>	<b>5</b>	<b>4</b>	<b>6</b>
This course is designed to give the beginning student an understanding of basic science principles and their relationships to practical nursing. This course includes study of the structure and functions of the human body, principles of foods and nutrition and selected efforts of microbiology as related to nursing. Prerequisite: None.			
<b>NUR 1102 Orientation to Vocational Relationships</b>	<b>2</b>	<b>0</b>	<b>2</b>
This course is designed to assist the student in understanding herself, her vocation and the individual needs of her patients. Emphasis is placed on the development of appreciations and attitudes which will assist the student in understanding her role as a potential worker in nursing, in establishing effective relationships with her co-workers and patients, and in establishing realistic goals for herself in her personal and vocational development. Prerequisite: None.			

**NUR 1103 Introduction to Patient Care** 6 6 8

This course is planned to provide the opportunity for students to gain a knowledge of the principles which are basic to effective and safe nursing care. Emphasis is placed on the development of the essential skills for the performance of those nursing measures that normally are the responsibility of the Licensed Practical Nurse. Lecture and planned class laboratory experience are followed by related clinical experience. Prerequisite. None.

**SECOND QUARTER**

**NUR 1104 Basic Principles of Drug Administration** 3 0 3

The basic concepts of drug therapy and an appreciation of the responsibilities and the necessary limitations of the Licensed Practical Nurse in the administration of medication are emphasized. Prerequisite: NUR 1101, NUR 1103

**NUR 1105 Care of Patients With Medical-Surgical Conditions I** 9 24 17

This course is designed to provide the student the opportunity to gain an understanding of the nursing needs of patients who have various medical-surgical conditions and to develop further understanding of the common drugs and therapeutic measures of concern to the practical nurse. Lecture and class laboratory provide the background for selected clinical experiences. Prerequisite: NUR 1101, NUR 1103.

**THIRD QUARTER**

**NUR 1106 Maternal and Child Care** 6 12 10

This course is designed to provide opportunities for students to acquire the knowledge, understanding and skill needed for rendering safe and effective nursing care to the maternity patient and newborn infant. Classroom instruction provides the background essential for planned clinical experience centered around analysis of nursing needs and formulation of a nursing care plan to meet individual patient needs. Prerequisite: NUR 1101, NUR 1103, NUR 1105.

**NUR 1107 Care of Patients with Medical-Surgical Conditions II** 6 12 10

A Continuation of NUR 1105. Prerequisite: NUR 1104, NUR 1105.

**FOURTH QUARTER**

**NUR 1108 Care of Infants and Children** 6 12 10

The course is designed to provide opportunities for students to acquire the knowledge, understanding and skills needed for rendering safe and effective nursing care of infants and children. Classroom instruction provides the background essential for planned clinical experiences centered around analysis of nursing needs and formulation of a nursing care plan to meet individual patient needs. Prerequisite: NUR 1106, NUR 1107.

**NUR 1109 Care of the Seriously Ill and Injured** 4 12 8

This course is designed to prepare the student for participation in the care of seriously ill patients and for development in the care of selected patients. Emphasis is placed on the assisting role of the Licensed Practical Nurse Classroom instruction provides the background for planned clinical experiences. Prerequisite: NUR 1105, NUR 1106, NUR 1107.

<b>NUR 1110 Vocational Relationships</b>	<b>2</b>	<b>0</b>	<b>2</b>
This course is designed to orient the student to her role as a Licensed Practical Nurse. It includes the study of opportunities in practical nursing and the obligations and responsibilities of the Licensed Practical Nurse as a person, a worker and a citizen. Relationships with other members of the health team to more fully achieve the goals of nursing are emphasized throughout the course. Prerequisite: Complete all NUR courses in previous quarters.			

**PSYCHOLOGY**

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-PSY 112 Personality Development (Elective)</b>	<b>3</b>	<b>0</b>	<b>3</b>
Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement. Prerequisite: None.			
<b>T-PSY 206 Applied Psychology (Elective)</b>	<b>3</b>	<b>0</b>	<b>3</b>
A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings and emotions are considered with particular reference to on-the-job problems. Other topics investigated are: employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community. Prerequisite: None.			
<b>PSY 1101 Human Relations</b>	<b>3</b>	<b>0</b>	<b>3</b>
A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation. Prerequisite: None.			

**SCIENCE**

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-PHY 105 Survey of Physical Science</b>	<b>3</b>	<b>0</b>	<b>3</b>
A general survey of astronomy, physics, geology, and chemistry. The astronomy emphasizes our solar system with a brief survey of other areas of general interest. Physics is approached by such as photography, meteorology, radio and television, home appliances, and the automobile with physical principles illustrated. A physical geology of the earth is briefly surveyed with the earth's structure, constitution, and changing face studied. The chemistry of, everyday materials is given after a brief look at some broad elementary principles.			
<b>T-PHY 106 Survey of Physical Science</b>	<b>3</b>	<b>0</b>	<b>3</b>
A continuation of above.			

## SOCIAL SCIENCE

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-SSC 101 Western Civilization</b>	3	0	3
A survey of the political, economic, and social development of European civilization from ancient times to 1600 A.D. Special emphasis is placed on the intellectual and social developments that have contributed to present concepts and ideas. Prerequisite:			
<b>T-SSC 102 Western Civilization</b>	3	0	3
A continuation of the study of European civilization from about 1660 A.D. to the present. Prerequisite:			
<b>T-SSC 201 Social Science</b>	3	0	3
An integrated course in the social sciences, drawing from the fields of anthropology, psychology, history, and sociology. Prerequisite: None.			
<b>T-SSC 202 Social Science</b>	3	0	3
A further study of social sciences with emphasis on economics, political sciences, and social problems as they relate to the individual. Prerequisite: T-SEC 201.			
<b>T-SSC 205 American Institutions (Elective)</b>	3	0	3
A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker. The course dwells upon current local, national, and global problems viewed in the light of our political and economic heritage. Prerequisite: None.			

## SOCIOLOGY

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>T-SOC 207 Rural Society (Elective)</b>	3	0	3
A study of selected elements of rural sociology with emphasis on current social changes. The course provides a sociological background for the understanding of rural social changes. Areas of study include rural culture, group relationships, social classes, rural and suburban communities, farm organizations, the communication of agricultural technology, rural social problems, agricultural adjustment and population change. Prerequisite: None.			
<b>SOC 1101 Human Relations I</b>	3	0	3
Development of understanding of relationships to other persons through some of the basic principles of human psychology. The problems of the individual and his work situation are studied in relation to the established organization of modern business and industry, and in relation to governmental practices and labor organizations, with special emphasis on the operating responsibilities of good management.			

## TEXTILES

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>TEX 1101 Yarn Manufacturing I</b>	3	3	4
A basis study of the function of yarn manufacturing. Emphasis is placed on yarn manufacturing with study of flow systems, functions of each			

machine and machine part, and the introduction of basic calculations related to yarn manufacturing. Yarn numbering is included. Laboratory exercises to supplement lectures are included. Prerequisite: None. Co-requisite: TEX 1104, MAT 1101.

**TEX 1104 Textiles Fibers** 2 2 3  
A study of the physical, chemical and aesthetic properties of the major natural and man-made textile fibers. Included are methods of measuring properties, influence of fiber moisture regain on physical properties, and processing characteristics. Fiber identification by laboratory analysis is included. Prerequisite: None.

**TEX 1106 Weaving** 2 3 3  
An introduction to the study of woven fabrics. The methods of preparing yarns for weaving, the weaving of fabrics, and the necessary calculations to produce a woven fabric are included. Laboratory exercises in the operation of the looms supplement the lectures. Prerequisite: TEX 1104. Co-requisite: TEX 1108.

**TEX 1108 Yarn Manufacturing II** 5 6 7  
A continuation of TEX 1101, including blending methods, effectiveness and influence on end product. Twist in its many ramifications, spinning limits; drafting methods, types and limits. Packaging, production, and the determination of mill balance are discussed. Conventional and new developments in manufacturing concepts are included. Special yarn preparation systems are reviewed. Laboratory periods are used to supplement lectures. Prerequisites: TEX 1101, MAT 1101.

**TEX 1110 Knitting** 3 3 4  
A study of the selection and preparation of knitting yarns, knitting mechanisms and the structure of different types of spring and latch needle fabrics. The operation and adjustment of the basic types of knitting machines are included in this course. Laboratory exercises are included. Prerequisite: TEX 1108.

**TEX 1115 Textile Testing** 3 3 4  
This course includes Physical Textile Testing. The Physical Testing includes the methods and techniques of testing fibers, laps, roving, yarns and fabrics made from natural and synthetic fibers. Standard A.S.T.M. method and practices for the testing of textile materials are followed and a study is made of the various machines and apparatus employed in standard testing laboratories. Prerequisites: TEX 1108, TEX 1106.

**TEX 1120 Fabric Design and Analysis** 3 3 4  
A study of the fundamental principles of fabric structure. It includes the study of the three basic weaves, plain, twill, and satin plus many of their derivatives. Instruction in fabric analysis techniques and the use of laboratory instruments for the determination of fabric construction details is included. Prerequisites: TEX 1108, TEX 1106.

UPHOLSTERY

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>UPH 1111 Upholstery Materials and Methods</b>	2	0	2
Materials used in upholstering and their effect on design and drawing of plans for furniture. Types of materials and their characteristics, methods of fastening, accessory materials, frame types and construction, and processes of fabricating are included in this course. Prerequisite: None.			

## WELDING

Course Title	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
<b>WLD 1101 Basic Gas Welding</b>	0	3	1
Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work. Prerequisite: None.			
<b>WLD 1112 Mechanical Testing and Inspection</b>	1	3	2
The standard methods of mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guided-bend, nick-tear, notched-bend, tee-bend, nondestructive, V-notch, Charpy impact, etc. Prerequisites: WLD 1120, WLD 1121.			
<b>WLD 1120 Oxacetylene Welding and Cutting</b>	3	12	7
Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of units, welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed through the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds. Prerequisite: None.			
<b>WLD 1120-1 Oxyacetylene Welding and Cutting (Part time)</b>	2	6	4
<b>WLD 1120-2 Oxyacetylene Welding and Cutting (Part time)</b>	2	6	4
<b>WLD 1121 Arc Welding</b>	3	12	7
The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized throughout the course in the use of tools and equipment. Prerequisite: None.			
<b>WLD 1121-1 Arc Welding (Part time)</b>	2	6	4
<b>WLD 1121-2 Arc Welding (Part time)</b>	2	6	4
<b>WLD 1122 Commercial and Industrial Practice</b>	3	9	6
Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspection. Prerequisites: WLD 1120, WLD 1121.			
<b>WLD 1123 Inert Gas Welding</b>	1	3	2
Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and appli-			

cations, manual and automatic welding. Prerequisites: WLD 1120, WLD 1121.

<b>WLD 1124 Pipe Welding</b>	<b>3</b>	<b>12</b>	<b>7</b>
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Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code. Prerequisite: WLD 1121.

<b>WLD 1124-1 Pipe Welding (Part time)</b>	<b>2</b>	<b>6</b>	<b>4</b>
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<b>WLD 1124-2 Pipe Welding (Part time)</b>	<b>2</b>	<b>5</b>	<b>4</b>
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<b>WLD 1125 Certification Practices</b>	<b>3</b>	<b>6</b>	<b>5</b>
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This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds. Prerequisites: WLD 1120, WLD 1121, WLD 1123, WLD 1124.



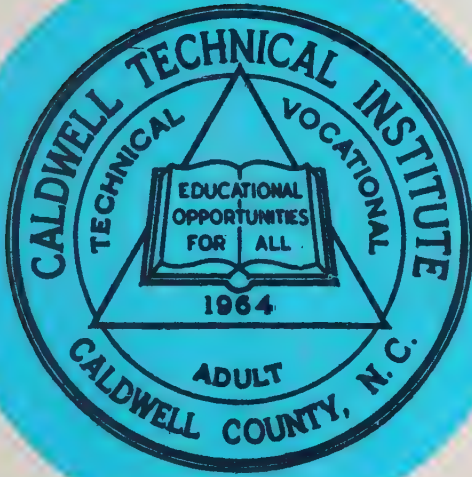






**CALDWELL TECHNICAL  
INSTITUTE**

**Box 600, Lenoir, N. C. 28645**

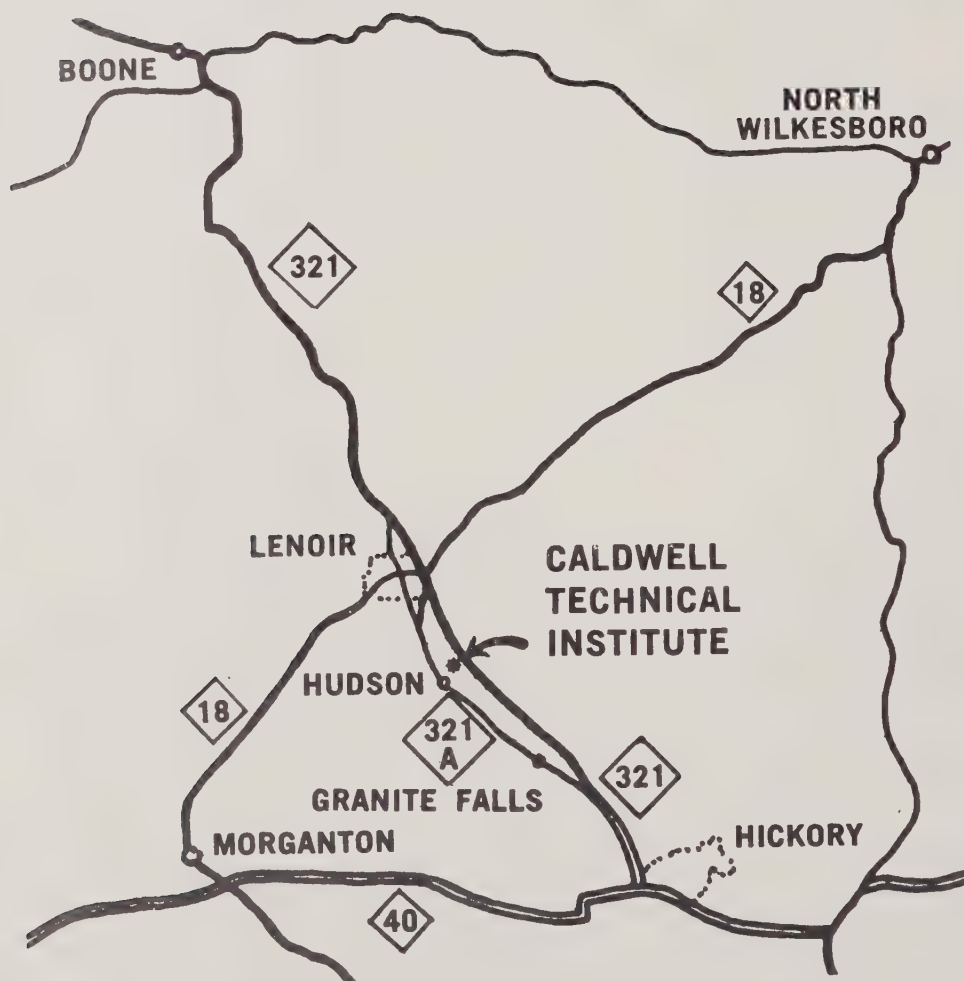


# CALDWELL TECHNICAL INSTITUTE

HUDSON, NORTH CAROLINA

## 1969

SUPPLEMENTARY CATALOG



Caldwell Technical Institute is located in Hudson, North Carolina, 6 miles south of Smith Crossroads, Lenoir and 9 miles north of Hickory, on Highway 321.

SUPPLEMENTARY  
CATALOG OF

# **CALDWELL TECHNICAL INSTITUTE**

HUDSON, NORTH CAROLINA

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FOR THE 4TH ACADEMIC YEAR

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Box 600  
Lenoir, North Carolina 28645  
or  
Box 684  
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Students having questions not answered in this publication may obtain further information from the Student Personnel Office Caldwell Technical Institute, Box 600, Lenoir, or Box 684, Hudson, North Carolina.

Telephones:

Lenoir area .....728-4323

Granite Falls & Hickory .....396-3311

The Institute reserves the right to make changes in the regulations, courses, fees, and other matters of policy and procedure as and when deemed necessary.

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## ACADEMIC CALENDAR

### *FALL QUARTER 1969 (55 Days)*

Registration	M-Tu-W	Sept. 8, 9, 10	
Classes Begin	Th	Sept. 11	8:00 A.M.
Fall Quarter Ends	W	Nov. 26	10:00 P.M.
Exams	M-Tu-W	Nov. 24, 25, 26	
Thanksgiving Holidays	Th-F	Nov. 27, 28	

### *WINTER QUARTER 1969-1970 (55 Days)*

Registration	M-Tu	Dec. 1, 2	
Classes Begin	W	Dec. 3	8:00 A.M.
Christmas Holidays Begin	F	Dec. 19	5:00 P.M.
Classes Resume	M	Dec. 29	8:00 A.M.
New Years Holiday Begins	W	Dec. 31	10:00 P.M.
Classes Resume	F	Jan. 2	8:00 A.M.
Winter Quarter Ends	W	Feb. 25	10:00 P.M.
Exams	M, Tu, W	Feb. 23, 24, 25	

### *SPRING QUARTER 1970 (55 Days)*

Registration	M-Tu	March 2, 3	
Classes Begin	W	March 4	8:00 A.M.
Easter Holidays Begin	Th	March 26	10:00 P.M.
Classes Resume	Tu	March 31	8:00 A.M.
Spring Quarter Ends	Th	May 21	10:00 P.M.
Exams	Tu-W-Th	May 19, 20, 21	

### *SUMMER QUARTER 1970 (55 Days)*

Registration	Th-F	June 4, 5	
Classes Begin	M	June 8	8:00 A.M.
Independence Holidays Begin	F	July 3	5:00 P.M.
Classes Resume	W	July 8	8:00 A.M.
Quarter Ends	W	Aug. 26	10:00 P.M.
Exams	M-Tu-W	Aug. 24, 25, 26	

### *FALL QUARTER 1970 (55 Days)*

Registration	M-Tu-W	Sept. 7, 8, 9	
Classes Begin	Th	Sept. 10	8:00 A.M.
Fall Quarter Ends	W	Nov. 25	10:00 P.M.
Exams	M-Tu-W	Nov. 23, 24, 25	
Thanksgiving Holidays Begin	W	Nov. 25	10:00 P.M.

*WINTER QUARTER 1970-1971 (55 Days)*

Registration	Tu-W	Dec. 1, 2	
Classes Begin	Th	Dec. 3	8:00 A.M.
Christmas Holidays Begin	F	Dec. 18	5:00 P.M.
Classes Resume	M	Jan. 4	8:00 A.M.
Winter Quarter Ends	W	Mar. 3	10:00 P.M.
Exams	M-Tu-W	Mar. 1, 2, 3	

*SPRING QUARTER 1971 (55 Days)*

Registration	Tu-W	Mar. 2, 3	
Classes Begin	M	Mar. 8	8:00 A.M.
Easter Holidays Begin	Th	April 8	10:00 P.M.
Classes Resume	Tu	April 13	8:00 A.M.
Spring Quarter Ends	W	May 26	10:00 P.M.
Exams	M-Tu-W	May 24, 25, 26	

*SUMMER QUARTER 1971 (53 Days)*

Registration	Th-F	June 3, 4	
Classes Begin	M	June 7	8:00 A.M.
Independence Holidays Begin	F	July 2	5:00 P.M.
Classes Resume	M	July 12	8:00 A.M.
Summer Quarter Ends	W	Aug. 25	10:00 P.M.
Exams	M-Tu-W	Aug. 23, 24, 25	

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MRS. DAVANNA B. GREER	MRS. HELEN B. WISEMAN
MRS. PATRICIA D. ICARD	

## INSTRUCTIONAL STAFF

- Almond, Hugh H. . . . . Data Processing  
B.S., High Point College; M.A., Syracuse University.
- Amos, Joe T. . . . . Automotive Mechanics, Welding  
Gaston Technical Institute.
- Armfield, George W. . . . . Industry Relation Tech.  
B.A.; Elon College; M.Ed., University of North Carolina; Additional  
study, N. C. State University.
- Beam, H. Edwin . . . . . Management Tech.  
B.S., N. C. State University; M.Ed., N. C. State University; Ed.D.,  
University of North Carolina.
- Bennett, Mark W. . . . . Coordinator of Fire Service Training  
Attended Weaver College.
- Bishop, Eliza F. . . . . English  
B.S., Appalachian State University; M.A., Appalachian State University
- Bishop, Tyrone R. . . . . Drafting  
B.S., Appalachian State University; M.A., Appalachian State University.
- Blevins, Irene T. . . . . Practical Nursing  
B.S., Montreat College; R. N., Memorial Mission Hospital.
- Bolick, Sarah L. . . . . Nursing—In Service Training  
R.N., Forsyth Memorial Hospital.
- Campbell, Rosalind C. . . . . Librarian—Library Technology  
B.A., Emory Henry College; M.A., Appalachian State University.
- Cantrell, James C. . . . . Drafting  
B.S., Western Carolina University; Graduate study, Appalachian State  
University.
- Carpenter, Thomas Eugene . . . . . Economics  
A.A., Brevard College; B.S., Clemson University; M.A., Appalachian  
State University.
- Crosby, John A. . . . . Social Studies  
B.S., Wake Forest University; M.A., Appalachian State University
- Gwyn, Rufus C. . . . . Data Processing  
B.A., University of Philadelphia; Additional study, New York Uni-  
versity.
- Hamilton, Hope R. . . . . Secretarial Science  
B.S., Southern Illinois University; M.A., Appalachian State University.
- Haynes, B. E. . . . . Machine Shop  
Diploma, Gaston Technical Institute; Additional study, N. C. State  
University.
- Hemphill, Jimmy D. . . . . Recreational Therapy  
B.S., University of North Carolina; M.S., University of North Carolina.

- Hoyle, Esther C. . . . . Library Technology  
B.A., University of North Carolina at Greensboro; M.A., Appalachian State University.
- Kincaid, Claudia S. . . . . English  
A.B., Lenoir Rhyne College; M.A., Appalachian State University.
- Marion, Mary L. . . . . Practical Nursing  
B.S., University of North Carolina at Greensboro; R.N., N. C. Baptist Hospital.
- Martin, Johnny S. . . . . Mathematics-Physics  
B.S., N. C. State University; Additional study, Appalachian State University.
- McAfee, Charles O. . . . . Business Education  
B.S., University of North Carolina; M.B.A. Harvard Business School.
- Minton, Lorraine W. . . . . Secretarial Science  
B.S., Appalachian State University; M.A., Appalachian State University.
- Phipps, Joe . . . . . Welding  
B.S., Appalachian State University; additional study, N. C. State University.
- Scheller, Robert L. . . . . Electrical Installation and Maintenance  
U. S. Navy, Electrical Instructors School.
- Sigmon, Rex G. . . . . Psychology  
B.A., Lenoir Rhyne College; M.A., Appalachian State University; Education Specialist Certificate, University of Texas; Additional study, University of Wyoming.
- Stallings, Dan N. . . . . Building Trades  
A.A., Mars Hill; B.S., Appalachian State University; M.Ed., University of North Carolina; Course work for Doctorate completed, University of North Carolina.
- Styres, Robert N. . . . . Furniture Production  
B.S., N. C. State University.
- Tilson, B. Hugh . . . . . Agricultural Business  
B.S., N. C. State University; Additional study, Columbia University.
- Watson, Myrtle E. . . . . Cosmetology  
Diploma, Hickory Beauty School; Additional study, N. C. State University and Wake Forest University.
- Wyke, D. Samuel . . . . . Social Studies  
B.S., Appalachian State University; M.A., Appalachian State University; Certificate of Advanced Studies—6th Year, Appalachian State University.

# THE INSTITUTE

## HISTORY

Several historical events are important in the development of the Caldwell Technical Institute.

The 1963 North Carolina General Assembly passed the Community College Act creating a system of comprehensive community colleges, technical institutes, and industrial education centers in the State under the State Board of Education.

In January, 1964, the Caldwell Technical Institute was tentatively approved by the State Board of Education. On March 28, 1964, the people of Caldwell county approved the institution through the bond note of \$600,000 for the purchase of the site and construction of the facilities and up to 5 cents tax authorization for operating the institution. Final approval by the State Board of Education followed on April 2, 1964.

The President was selected in October, 1964. The site was selected in January, 1965. Selection of the architect was made in February, 1965. New facilities were occupied in September, 1967.

## PURPOSES AND OBJECTIVES

Caldwell Technical Institute, serving primarily Caldwell, Watauga, and Avery counties and operating within the legal framework set by the North Carolina General Assembly, opens its doors to any person seeking an education. A "technical institute," as defined in the General Statutes of North Carolina, is an educational institution dedicated to the educational needs of the particular area for which it is established. It is charged with the responsibility of offering courses of a technical, of a vocational, and of a general adult nature. Not only is it committed to make training available for recent high school graduates but also for those persons already involved in the total community life and work.

Low tuition, easy accessibility, a comprehensive curriculum selected to meet the needs of a wide range of students and designed to change as the community it serves requires make the Institute an organization to serve the people as individuals and the community as a whole and to allow both to reap the rewards of a more highly-trained, more fully-enriched citizenry. The Institute places first the individual needs, both socially and economically; therefore programs of study are scheduled for persons who desire to complete high school, for persons who desire personal improvement or vocational growth, and for those whose goal is a challenging and productive occupation.

The Institute is flexible in its educational objectives, programs, and administrative organization in order to meet effectively new conditions and logical needs as they arise, thus providing for the development of skills and knowledge which will bring material and personal rewards for the areas it serves.

It is, therefore, engaged in a constant effort to determine overall needs of the community and its people and to meet those needs.

In keeping with the general purposes of Caldwell Technical Institute, the Board of Trustees, the administrative staff, and the faculty have adopted certain specific objectives. The Institute will endeavor to:

Provide inexpensive, continuing educational opportunities for out-of-school youth and adults at facilities located within commuting distance of people in the service area.

Provide effective teaching to all who enroll, with a continuing interest in the individual in terms of behavior motivation and achievement.

Provide educational opportunities for adults who discontinued their formal training before mastering the basic skills of reading, writing, and arithmetic.

Provide curricula that will reflect the changing needs of the community and the training patterns for employment.

Provide technical training for those persons wishing to enter the more highly skilled occupations in business and industry.

Provide vocational training for students who are preparing to enter occupations at a trade level.

Provide both technical and vocational courses on a part-time basis for adults now employed.

Provide a two year program of broad, general education for persons who desire college level work but who are not

interested in specializing in either the technical or the professional fields.

Provide general interest courses that meet the adult and community service needs of the people of the area.

Provide cultural opportunities to broaden the general education of the people of the community at large.

Provide an atmosphere which would inspire current students to encourage persons in secondary school as well as those out of school to give thought to further education.

Provide guidance services to each individual in order that he develop his potential to the fullest.

### **LOCATION**

The Caldwell Technical Institute is located on a 78 acre tract of land in Hudson, North Carolina. Since the Institute is on Highway 321, it is accessible to the population centers of Lenoir (5 miles), Granite Falls (5 miles), and Hickory (10 miles).

### **ACCREDITATION**

Caldwell Technical Institute is a comprehensive public Technical Institute operating under the North Carolina Department of Community Colleges. The institute is approved by the North Carolina State Board of Education. Caldwell Technical Institute is a candidate for accreditation by the Southern Association of Colleges and Schools.

# ADMISSIONS

## HOW TO APPLY FOR ADMISSION

1. **Secure application form and make application for admission.** Application forms may be secured from your local guidance counselor or by writing the Caldwell Technical Institute, Box 600, Lenoir, North Carolina, or by calling telephone number 728-4323 in Lenoir or 396-3311 in Granite Falls. The application for admission should be very carefully and accurately completed and submitted to the Institute as early as possible to assure a place in the curriculum desired. Enrollment limits are set for all curriculum offerings.

2. **Tuition Deposit (Required)**

All applications submitted for the regular curriculum courses must be accompanied by a \$5.00 non-refundable deposit which will be applied to the tuition of the particular quarter the student is seeking enrollment.

3. **Submit a transcript of high school records and of any post-high school work taken.** Ask the principal of the high school or the registrar of the college last attended to send a transcript of academic work to the Registrar at Caldwell Technical Institute. This transcript may be submitted at any time during the senior year in high school (if the applicant is still attending high school). An applicant meeting all other requirements will be given provisional acceptance pending receipt of his final grades from high school.

4. **Complete the Aptitude Test Battery given by Caldwell Technical Institute.**

Caldwell Technical Institute requires the School and College Ability Test for all **Technical** programs. The General Aptitude Test Battery or the Otis Intelligence Test and the Mechanical Reasoning Test of the Differential Aptitude Test is required of all vocational students. Applicants for the Data Processing and

Practical Nursing programs will be required to take additional subject related tests in English and mathematics.

Information concerning these tests may be obtained from the Student Personnel Office at Caldwell Technical Institute. There is no cost involved in taking the tests.

**5. Arrange for an interview with a member of the Student Personnel Staff or other representative of the Caldwell Technical Institute.** The interview is a requirement for completing the application process. The applicant may arrange for the interview through his guidance counselor, or by calling the Student Personnel Department at 728-4323 in Lenoir or 396-3311 in Granite Falls. The interview may be arranged in the local school or at Caldwell Technical Institute.

## **ADMISSION REQUIREMENTS**

The Caldwell Technical Institute is a co-educational institution open to any individual meeting the admission requirements for the particular course or area in which he wishes to enroll. These requirements vary with the areas of study offered by the Institute.

### **Technical Curricula**

Requirements for admission of a candidate to the regular two-year technology program include the following qualifications.

The candidate:

1. Must be a high school graduate or have a state approved equivalent education.
2. Have acceptable scores on the School and College Ability Test administered by Caldwell Technical Institute. (Acceptable scores on the College Board Scholastic Aptitude Test "S.A.T." may be used in lieu of the S.C.A.T.) Students entering Data Processing must also have an acceptable score on the Data Processing test. Students not meeting accepted standards must take developmental study courses to fulfill the necessary requirements.
3. Be in acceptable physical and mental health.
4. Have a personal interview with a designated member of the Student Personnel staff.

## **Vocational Curricula**

A candidate for admission to the regular trade-vocational training program must meet the following qualifications:

1. Must be at least 18 years of age.
2. Must have satisfactorily completed a minimum of eight units of accredited secondary school work or possess maturity, attitudes, aptitudes, and interests necessary for success in the particular curriculum for which he is applying.
3. Make acceptable scores on standard and/or local institutional tests administered by Caldwell Technical Institute.
4. Be in acceptable physical and mental health.
5. Have a personal interview with a designated member of the Student Personnel Staff.

## **PROVISIONAL STUDENT**

Students whose records are not complete may be permitted to enter the Institute as a **Provisional Student** on the basis of a personal interview with a member of the Student Personnel Staff. A provisional student will be required to complete the pre-entrance examinations and to submit all required transcripts prior to the final exam period of the particular quarter. In other words, he is admitted in good standing, provided examination scores, transcripts, and other information prove satisfactory. Should the above requirements not be met prior to the final examination period of the particular quarter in which he enters, grades will be recorded on the permanent record as "Audit" and no credit will be given.

## **INDUSTRY RELATED STUDENT**

All students now working full-time in industry who desire to enroll in courses directly related to their occupation are exempt from certain admissions requirements. Such students need only the written recommendation of their employer, a transcript, and the completed application form. However, before an industry related student can pursue the second year of an Associate in Applied Science degree program, he must have the high school diploma or an equivalency certificate. The exemption applies to the Furniture Technology Curriculum.

## **OTHERS**

Students possessing college degrees who wish to enter either technical or vocational courses will be exempt from the ad-

missions tests. Such students need only their college transcripts and the completed applications.

### **RE-ADMISSIONS POLICY**

A student dismissed from the institute for academic reasons can be considered for re-admission by the Admissions Committee after one quarter's absence following dismissal.

### **TRANSFER STUDENTS**

Students may be admitted with advanced standing by transfer from technical institutes, colleges or universities. All applicants for transfer must have maintained a "C" average or better on courses taken at other institutions and must be eligible to return to the last institution attended.

If admitted, the prospective transfer student's record will be evaluated by the Director of Student Personnel to determine the amount of credit that can be transferred and applied toward the program in which the applicant desires advanced standing.

### **PROFICIENCY EXAMINATIONS**

Advanced placement is offered to those students who, because of their demonstrated abilities, are qualified to accelerate their studies. To obtain advanced placement, the student may take a proficiency examination in a subject when he believes that he has mastery of the course material. Application for such an examination must originate with the Registrar. Electives may be chosen by the student to equal the number of credit hours omitted.

### **ADMISSION OF FOREIGN STUDENTS**

Caldwell Technical Institute is authorized by the U. S. Department of Naturalization and Immigration to admit foreign students. This permission was granted on July 12, 1966, with authorization number WAS 214-f562.

All applicants from foreign countries are expected to submit necessary academic documents with appropriate test results at least three months prior to the quarter in which they plan to enter.

### **VETERANS**

Qualified veterans who are admitted for instruction may be approved upon presentation of the Certificate of Eligibility issued by the Veterans Administration. Students will be accepted

under Public Law 550 or Public Law 89-358. Veterans under the above mentioned laws are responsible directly to the school upon registration for payment of all costs. Veterans will further be responsible for furnishing the Veterans Counselor with a monthly attendance report. No reimbursement cards can be authorized by the school until such reports are on file.

# GENERAL ACADEMIC REGULATIONS

## Grading System

Official grades are issued for each student at the end of each quarter. Students who lack passing averages at mid-quarter will be notified of this fact and should schedule a conference with the instructor and/or his advisor.

Students enrolled in curriculum program courses will be graded by the **letter-grade** system shown below and assigned a grade point equivalent in quality points for each quarter scheduled.

Numerical Equivalent	Letter Grade	Grade Point Equivalent
93-100	A—Excellent	4 quality points each quarter hour
85- 92	B—Good	3 quality points each quarter hour
77- 84	C—Average	2 quality points each quarter hour
70- 76	D—Below Average	1 quality point each quarter hour
Below 70	F—Unsatisfactory	0 quality points each quarter hour

Inc.—Indicates failure to complete certain course requirements because of extenuating circumstances. All incompletes must be removed before the end of the succeeding term or the grade becomes an automatic “F.”

WP—Student dropped the course, but had a passing grade average at the point of withdrawal.

WF—Student dropped the course, and had a failing grade average at the point of withdrawal.

Audit—Indicates no grade or credit given.

## **Courses Repeated for Credit**

When a course is repeated, the last grade is recorded as the final grade for the course, but all grades are counted in determining the student's grade point average.

## **Auditing**

A student who audits a course, pays the regular registration and tuition fees. Auditors do not take tests, examinations, or receive grades or credit and cannot later change the "Audit" to credit.

## **REMOVAL OF INCOMPLETES**

An "I," meaning incomplete, indicates that a student has done work of a passing grade in a course but has failed to do some portion of the required work because of an emergency. It is the student's responsibility to have this deficiency removed before the end of the first quarter following the time of receiving the grade of "I" (incomplete), or the grade will be changed to "F."

## **SCHEDULE CHANGES**

Change of student schedule after registration has been completed will be made only with permission of the Registrar.

## **ACADEMIC PROBATION**

Students failing to maintain a 2.0 overall grade point equivalent average will be considered on academic probation and may be required to modify his regular course load. A student will be asked to withdraw from a regular curriculum program if his grade point average drops below 1.0.

## **COURSE LOAD**

Students enrolled for 13 or more credit hours are classified as full-time students. Those taking less are classified as part-time. Normal course load will vary from one curriculum to another and should be carefully planned with the Faculty Advisor. A student may enroll for maximum load depending upon his capability as determined by his Faculty Advisor. A normal course load is outlined by departments in this catalog.

## **APPLICATION FOR DEGREE OR DIPLOMA**

Students are required to apply as candidates for the diploma or the degree. This must be completed during the first two weeks of the last quarter of school attendance. This insures that the candidate's record will be properly reviewed and that he will be notified of any deficiencies.

### **Requirements for Graduation**

A student is eligible for graduation when he has fulfilled the following requirements:

1. Has satisfactorily completed all the requirements of the curriculum in which he is enrolled.
2. Has sufficient quality points for an overall average of 2.0.
3. Has taken care of all financial obligations to the Caldwell Technical Institute.

### **Honors**

A graduating student who has earned an overall quality point average of 3.0 or better during his work at the Caldwell Technical Institute will receive his diploma or degree "With Honors."

## **RESTRICTIONS ON CLASS ADMISSIONS**

No person may attend classes unless the registration procedure has been completed.

## **STUDENT DEFERMENT**

The Selective Service makes provisions for those students who meet certain requirements to be deferred. The first requirement is enrollment in a full time curriculum program (minimum 13 credit hours), and the second one is satisfactory progress in the program.

## **RESIDENCY REQUIREMENTS FOR GRADUATION**

Candidates for a diploma or degree from Caldwell Technical Institute are expected to complete the last 25% of their course work at the Institution.

### **Attendance Policy**

Students are expected to attend every meeting of every course in which they are enrolled. As all students are adults,

some with many responsibilities, an occasional absence from class might be absolutely necessary; however, such absences in no way lessen the student's responsibility for meeting the requirements of the class.

In case of prolonged illness, a student should present a doctor's certificate for any absences beyond the third day (or from the beginning if a teacher requests it) if he wishes such absences to be excused.

According to institute regulations, "A student must be dropped from the roll not later than the fifth consecutive unexcused absence, or earlier if notified by the proper institutional official."

## **SUSPENSION AND DISMISSAL**

Students will be expected to conduct themselves at all times as individuals of prudence and maturity. The rights and feelings of others will be respected. Students shall demonstrate a high regard for school facilities and property and for the personal property of others.

School regulations which serve to control such activities as vehicular traffic and parking, smoking, and other aspects of personal conduct must be observed. Students may be suspended or dismissed for conduct which is considered incompatible with standards of propriety and good judgment.

Re-admittance of dismissed students at a subsequent session will be at the discretion of the College Executive Council.

## **TRANSCRIPTS OF CREDIT**

Transcripts of credit will be supplied to all students and former students requesting them, subject to certain conditions. Individuals must have made satisfactory financial arrangements to care for all amounts due the Institute.

## **WITHDRAWING FROM SCHOOL**

Students who withdraw from the Institute during any quarter must first consult with the Student Personnel Office. This protects the student's scholastic record, his right to re-enroll, and his right to transfer to another technical institute.

A student may withdraw from any course prior to the end of the 8th week and receive a W.F. or W.P. with no bearing on his G.P.A. There is no limit to the number of times a student may withdraw from a particular course.

## **Student Contact Hours**

The contact hours shown in the catalog are minimal. It is a policy of this institution to permit students to enroll in additional subjects and laboratory work beyond those shown in the catalog in order to broaden their training.

When in any quarter the total weekly contact hours listed are fewer than twenty-five hours in a technical curriculum and fewer than thirty hours in a vocational trade curriculum, a student may enroll on request and with the approval of the Director of Student Personnel for additional instructional hours to make up twenty-five hours per week in a technical curriculum or sufficient hours of attendance to make up thirty hours per week in a vocational trade curriculum.

## **CATALOG REQUIREMENTS**

Candidates for the diploma or degree must meet the requirements as outlined in the catalog for the year of their first enrollment or for any subsequent bulletin under which work is taken, but in all cases must complete work for their diploma or degree within 10 years from the date of the catalog selected.

# STUDENT EXPENSES

## STATEMENT OF POLICIES REGARDING STUDENT EXPENSES

Tuition and fees for each quarter are payable on or before the date of registration.

All checks and money orders should be made payable to Caldwell Technical Institute. A check given in payment of expenses which is returned by the bank creates an indebtedness to the Institute and jeopardizes the student's enrollment.

Any student who is unable to make payment at the time of registration must make special arrangements with the Business Manager to pay outstanding balance of tuition and fees within the first week of classes. If a longer extension of time is needed a student must assure payment of any outstanding balance of tuition and fees.

## TUITION

### FULL-TIME STUDENTS

All vocational, technical, special, and audit students who are enrolled for thirteen (13) or more credit hours are charged a maximum of \$32.00 per quarter; students enrolled for 13 credit hours or more are full-time students.

### TYPICAL QUARTER EXPENSES FOR ALL FULL-TIME STUDENTS

	Fall Quarter	Year "3 Quarter" Total	Year "4 Quarter" Total
Tuition .....	\$32.00	\$ 96.00	\$128.00
Activity Fee .....	3.00	9.00	12.00
Insurance (Optional) .....	3.00	3.00	3.00
Books and Supplies (Estimate) ..	30.00	60.00	70.00
<b>TOTAL</b> .....	<b>\$68.00</b>	<b>\$168.00</b>	<b>\$213.00</b>

## PART-TIME STUDENTS

The tuition charge for curriculum credit students (and audit students) is \$2.50 times the number of credit hours for which the student is enrolled. Example: 9 credit hours  $\times$  \$2.50 = \$22.50.

The formula for equating credit-hours with contact hours for the purpose of figuring tuition charges is as follows:

1 class hour = 1 credit hour

2 lab hours = 1 credit hour

3 shop hours = 1 credit hour

## ADVANCE TUITION DEPOSIT

### For New Students

A \$5.00 advanced tuition deposit is required with all applications for full-time attendance. This amount will be deducted from the student's first quarter tuition charge, leaving a balance of \$27.00. **The tuition deposit is not refundable.**

## ACTIVITY FEE

### (Full and Part-time Students)

All curriculum students taking three or more courses will pay a student activity fee of \$3 per quarter at the time of registration. Part-time students taking two courses will pay \$2; students taking 1 course will pay \$1. No activity fee will be collected for extension courses. These fees are used to finance student body activities such as: school newspaper, school annual, dances, picnics, sports supplies and equipment, special events, etc. **This fee is not refundable.**

## INSURANCE

Accident insurance, covering hours in school and transportation to and from school, is available for \$3.00 per year. Students desiring this insurance may make payment to the bookkeeper while registering for the Fall Quarter and at other designated times. **It is not refundable.**

Neither the Institute nor the State of North Carolina carries insurance to cover any student for accidents or otherwise. Therefore, students enrolled in all shops and labs are particularly urged to take advantage of this insurance.

## **Books and Supplies**

A student is required to buy the necessary textbooks and supplies prescribed in the curriculum area he is entering. These vary according to different courses taken by the student. An average expenditure of \$30.00 can be expected by the new Fall Quarter student for books. The bookstore handles second-hand books for students wishing to cut their book expense. Normal school supplies are sold during regular bookstore hours.

## **FEES FOR SPECIAL PURPOSES**

Graduation expenses for diploma, cap and gown are payable at the beginning of the quarter in which the student expects to graduate. These costs are presently set at approximately \$10.00.

Cosmetology students are required to purchase their uniforms. These costs vary among different students.

Advotech. The school yearbook is provided to students each spring quarter with cost assessed as follows:

Students paying \$9 activity fees — No extra charge

Students paying \$8 activity fees — \$1 extra charge

Students paying \$7 activity fees — \$2 extra charge

The yearbook cost is pro-rated so that students paying any amount of activity fee will receive that amount of credit on the cost of the yearbook. The 1968-69 edition of the Advotech sold for \$9.00 per volume.

## **LATE REGISTRATION FEE**

Students that have attended Caldwell Technical Institute the quarter prior to any registration period will be assessed a \$1.00 per course late registration fee when registering at periods other than those specified in the school calendar.

## **REFUNDS FOR FULL-TIME STUDENTS**

Tuition refunds for full-time students are made only when a student withdraws from the Institute for unavoidable reasons. In such cases, \$20.00 may be refunded if withdrawal is completed within 10 calendar days from the first day of classes in the particular quarter.

## REFUNDS FOR PART-TIME STUDENTS

Refunds for part-time students are made only when a student withdraws from the Institute for unavoidable reasons. In such cases, two-thirds of the student's tuition may be refunded if withdrawal is completed within 10 calendar days from the first day of classes in the particular quarter. Refunds for tuition of \$5 or less will not be considered unless a course fails to materialize.

### Refunds for Veterans

Those students who are veterans or war orphans receiving benefits under U. S. Code, Title 38, Chapter 33 and 35 may be refunded the **pro rata** portion of the tuition fee not used at the time of withdrawal of such students.

There is no refund on payments for activity fees, insurance premium fees, and special fees such as late registration.

# FINANCIAL AID FOR STUDENTS

## GENERAL INFORMATION

Caldwell Technical Institute encourages prospective students who desire to enroll but face difficult financial problems to consult with the Student Aid Committee through the Director of Student Personnel.

This committee is concerned not only with the awarding of scholarships but also with awarding work study grants and loans. Within the limited funds available for these purposes, every effort is made by the Institute to help students who need monetary assistance.

## APPLICATION PROCEDURE

Students who are entering Caldwell Technical Institute for the first time and are in need of scholarship aid are requested to follow this pattern of cooperation:

1. After application for admission has been initiated (see Admissions), write to the Director of Student Personnel and outline need for financial aid. Instructions and the aid application, SP form 11, will be sent to the applicant. It is to the advantage of the student to apply as early as possible for financial assistance.
2. The applicant should complete the student aid application as soon as possible and return it to the Director of Student Personnel. All items on the application **must** be complete for the committee to consider the application.
3. Report for a personal interview when designated.

4. Determination of the scholarship, loan, or work-study grant will be made by the Institute's Student Aid Committee and applicants will then be notified by letter from the Director of Student Personnel.

## **SCHOLARSHIPS**

Scholarships available as of the printing of this publication are:

### **Claude F. Seila Scholarship**

Awarded each year to one student taking a full time curriculum. This scholarship, given by the Lenoir Woman's Club, will award \$175.00 to the recipient.

### **Anna Hasburg Mills Memorial Nursing Scholarship**

Awarded each year to one student taking the Practical Nursing curriculum. This is a full scholarship covering all tuition, fees, and textbooks in the program. This \$1,000.00 memorial scholarship fund was given by Mrs. Grace Mills Love.

### **Lenoir Kiwanis Club Sponsorship**

Awards granted to students in the form of tuition grants, according to need and on a quarterly basis. This \$300.00 scholarship fund was established by the Lenoir Kiwanis Club on December 27, 1966.

### **Half Century Home Demonstration Club Scholarship**

A \$150.00 scholarship to be awarded to any deserving student.

### **Alpha Delta Kappa Sorority Scholarship**

This tuition scholarship was presented to the Institute on December 12, 1967, to be awarded to deserving students.

### **The Arthur Alfred Rauchfuss, Sr. Memorial Fund**

A memorial scholarship fund established by the family, to be awarded to deserving students.

### **Lenoir Woman's Club Scholarship Fund**

Awards given to students in the form of tuition, fees and textbook expense, according to need and on a quarterly basis. This scholarship fund was established by the Lenoir Woman's Club in 1966 and is to be awarded to deserving students.

### **Mac Dula Studio Scholarship**

A \$100.00 scholarship to be awarded a Hudson High School student attending Caldwell Technical Institute.

### **Dr. Caroline M. McNairy Scholarship Fund**

A memorial scholarship fund established in 1969 to be awarded to deserving practical nursing students.

### **Special Scholarship Fund**

Awards granted to students in the form of tuition, fees, and textbook grants on a quarterly basis. This \$1000.00 Special Scholarship Fund was established by 10 area progressive businessmen in 1968 and is to be awarded to deserving students.

## **NATIONAL DEFENSE STUDENT LOANS**

Caldwell Technical Institute participates in the National Defense Student Loan Program. Through this program, low-interest, long-term loans are made to full-time students. The maximum amount that a student can receive under this program is \$1000.00 per year.

## **COLLEGE SCHOLARSHIP SERVICE**

Caldwell Technical Institute serves students directly as a disbursing agency for the College Scholarship Service which makes loans to students in varying amounts with low interest and long-repayment periods. This is a non-profit organization located in Raleigh, N. C. Applications for these loans are available from the Director of Student Personnel.

## **EDUCATIONAL OPPORTUNITY GRANTS**

This program of direct grants of financial aid is available to students from low-income families who would not be able to attend Caldwell Technical Institute without such help. Grants are made to cover all expenses necessary for the student to continue at Caldwell Technical Institute.

## **COLLEGE WORK-STUDY PROGRAM**

Caldwell Technical Institute participates in the College Work-Study Program which provides on campus work opportunity for students needing financial assistance to attend school. Work is available for students to assist in the library, faculty and administrative offices, bookstore, laboratories, shops, and building maintenance. Students working under this program are paid in cash monthly for the work performed.

## **OTHER AGENCIES AND RESOURCES**

Caldwell Technical Institute serves as a referral and information agency for the following resources:

- A. Veterans Benefits
- B. Social Security Agency
- C. Department of Public Welfare
- D. Various North Carolina Agencies

## **VETERANS EDUCATION BENEFITS**

Caldwell Technical Institute is approved by the Veterans Administration for students who are eligible under the law. Eligible persons for benefits are urged to take advantage of the guidance service and educational facilities of the Institute. Veterans and dependents or students who expect to enroll under the War Orphans Educational Assistance Act should contact their Veterans Service Office in advance of registration.

# STUDENT SERVICES

## GENERAL PHILOSOPHY

Caldwell Technical Institute clearly recognizes the importance of self-understanding and personal growth in each student as well as his intellectual and social development. The Institute's program of counseling and guidance has been developed within the context of this philosophy.

Student services deal with various types of student assistance, including admissions, counseling, guidance, orientation, curriculum placement, supervision and assistance in planning extracurricular activities, part-time employment, financial aid, student government, graduate placement, school publications, and referral sources.

Guidance, broadly conceived, is reflected through faculty-student relationships, through organized counseling services and through extracurricular activities.

## COUNSELING AND TESTING SERVICE

### Counseling

Opportunity for counseling services is made available to every student enrolled in Caldwell Technical Institute. Counseling services are available for the discussion of personal problems affecting the satisfactory progress of the student in his chosen curriculum, for the discussion of his educational progress and for the discussion of work or study habits.

Each student is also assigned a faculty advisor to whom he may go for help.

### Testing Service

Testing is provided at no cost to the students at CTI. In addition to admissions tests, the testing program has tests available to measure aptitude, temperament, achievement, and vocational interest. Individuals are encouraged to avail themselves to these services.

## **Community Counseling Service**

Individuals of the community are invited to participate and use the counseling and guidance services available at Caldwell Technical Institute. Those individuals who feel they need assistance in the attainment of personal goals are invited to use this service. There is no charge for these services.

## **Faculty Advisor System**

This program is a cooperative effort of the faculty and Student Personnel Office. At the time of enrollment, each student is assigned a faculty advisor. The main purpose of the advisor is to assist students in planning their programs and selecting courses so that appropriate progress will be realized. Each student is expected to be fully aware of his status in his program in relation to standards of the institution.

## **Extracurricular Activities**

Student participation in extracurricular activities is encouraged by the Institute. Each student organization is required to have a faculty advisor. The Student Government regulates all extracurricula activities.

## **Alumni Association**

Preliminary plans have been made to establish an active alumni association at Caldwell Technical Institute. The first organizational meeting was held on June 5, 1969.

## **Student and Alumni Placement**

The Placement Service is handled by the Director of Student Personnel and is designed to assist all students in their search for either temporary or career job opportunities. This service seeks to develop and maintain relationships with local and national employers who are looking for qualified applicants, and schedules recruiting interviews on and off campus throughout the year. Students and alumni are encouraged to register and confer with this office as frequently as they desire whether or not they have immediate need for job placement services. There are no fees for this service.

## **Student's Responsibility for Securing Special Help**

It is the student's responsibility to seek out extra help if needed. Instructors are available for conferences at regular

scheduled office hours but will not require that a person come in for extra help. In all cases, an instructor will be more than willing to help, but it is up to the individual to ask for help.

### **Social Life**

The Student Lounge is the social and recreational rallying point of "CTI students" for relaxation. Students and faculty meet informally to drink coffee between classes, especially at free periods, for refreshments and snacks or simply to chat with friends.

Students are allowed special rates at local bowling lanes, movies, swimming pools, community centers, etc. These activities are in addition to the regularly scheduled extracurricular activities of the Institute.

### **Honors**

Each year many students receive various honors awarded by the faculty and student body of Caldwell Tech. Listed among the more important of these are students selected for Who's Who In American Junior Colleges, The quarterly President's List, graduation "With Honors," Miss C.T.I., Christmas Queen, Editor of the "ADVOTECH," Editor of the "Tech Teer," Officers of the Student Government and various clubs, special faculty "Honor" certificates to outstanding students, plus many others.

# LIBRARY

Learning to appreciate and use the library is an important part of every individual's education. Caldwell Technical Institute recognizes this as a significant factor in all of its programs. Every effort has been made to supply the best resource material to meet the needs of the student, the faculty, and the community.

The book collection includes about 12,000 volumes of books and pamphlets representing the different curricula. These books are as follows:

1. Books comprising the core collection and supporting the different curricula.
2. Books on the periphery of the curricula which are of serious, general interest.
3. Books of supplementary reference value, such as general histories or biographies.
4. A representative collection of fiction, short stories, and plays.

Caldwell Technical Institute subscribes to approximate 200 well-chosen periodicals which represent and support the curricula.

The library staff provides orientation on how to find and use books and materials in the library. Students are urged to use the facilities for study and relaxation and to ask for help when they feel the need of it.

## **ADVANCEMENT LABORATORY (Adjoining Library)**

The purposes of the Caldwell Technical Institute Advancement Laboratory are threefold: to provide necessary materials and facilities to help adults prepare for the high school equivalency examination, to help students and adults gain educational improvement of their own choosing, and to help students remedy academic deficiencies.

The only necessary materials an applicant need furnish are pencil and paper, and the only requirement is that he be at least sixteen years old.

# DEVELOPMENTAL STUDIES PROGRAM

The Developmental Studies Program in Mathematics is designed for the technical student whose level of achievement at the time of admission to the Institute indicates a low probability of success in curriculum courses. A student is selected for this program if his high school record, entrance test scores, and information gained by interview would indicate the likelihood of difficulty with the curriculum for which he has applied. The Developmental Studies Program consists of conventional classroom instruction and individualized study in the programmed materials laboratory.

For the 1969-1970 school year, a School and College Ability Test (S.C.A.T.), Converted Quantitative Score of less than 290 will indicate placement in D-MAT 090.

Students assigned to courses of the Development Studies Program may also enroll in any credit course for which they are prepared.

The quarter hours of credit shown opposite the course listed for this program is for institutional credit only. Institutional credit cannot be applied toward the Associate Degree. Such credit will be considered only for the purpose of scheduling classes and computing charges.

Awarding grades to students is the responsibility of the classroom instructor. Students enrolled in Development Studies will be graded by Satisfactory, "S", or Unsatisfactory, "U". Students must earn a satisfactory rating in Developmental Studies to progress to regular credit course(s) in subject areas.

		Hours Per Week		Quarter
		Class	Lab	Hours Credit
D-MAT 090	Developmental Mathematics . . . . .	2	3	4

A refresher course for those who have earned the required number of units of high school mathematics, or the equivalent, but who have not achieved a satisfactory score on the Converted Quantitative Score of the School and College Ability Test (S.C.A.T.). For these students, successful completion of D-MAT 090 is required before further study of Mathematics for credit.

# GENERAL ADULT AND COMMUNITY SERVICE PROGRAMS

The Caldwell Technical Institute provides training in numerous subjects through its General Adult programs. Adult classes are held both at the institute and at various locations throughout Caldwell, Watauga and Avery Counties. These classes are designed to prepare individuals for employment or to upgrade workers already employed.

The General Adult department also serves area industries and public agencies by providing training for their employees. Training under this division of the Institute can be offered at any time a need for such training is established. Full details can be obtained by contacting the Director of Adult Education at the Institute.

## **Admission Requirements**

Generally speaking any individual who is 18 years of age or whose high school class has graduated is eligible for admission to General Adult classes; applicants are usually admitted on the first come, first served basis. Some classes may have specific admission requirements, in such cases the Director of Adult Education will inform applicants of these requirements.

## **Expenses**

Many of the extension classes are offered without charge to the students; in other cases a small fee is charged to cover the cost of instructional supplies. Any charges should be paid at the first class session.

## Certificates

The Extension Division issues certificates to those who complete a course satisfactorily.

### EXAMPLES OF GENERAL ADULT PROGRAMS OFFERED

Auto Mechanics	Machine Shop Practice
Auto Electricity	Pilot's Ground School
Basic Electronics	Power Sewing
Blueprint Reading	Slide Rule
Electricity	Small Engine Repair
Electronic Circuits	Supervisory Development Courses
Furniture Upholstery	Tourist Serving Training
Instrumentation	Upholstering
Janitorial Maintenance	Waitress Training
Loom Fixing	

### AGRICULTURAL

Farm Records	Pesticides
Fertilizers and Lime	Welding for Farmers

### BUSINESS

Typing	Shorthand	Bookkeeping
	Speed Writing	

### CONSTRUCTION

Bricklaying	Plumbing
Carpentry	Ceramic Tile
Housewiring	Construction

### PUBLIC AGENCIES

Fire Training	Nurses' Aide
Fire Officer Training	Orderlies Training
Fire First Aid	Police Training
	Teacher Aides

### SUPERVISORY DEVELOPMENT

The Art of Motivating People	Effective Communications
Effective Writing	Job Methods
Effective Speaking	Industrial Safety & Accident
Human Relations	Prevention
Industrial First Aid	Job Analysis Training
	Work Measurement

This, of course, is in no way comprehensive, but is offered as a general sample of these courses. For further information on this division contact the Director of Adult Education.

## ADULT BASIC EDUCATION

Adult Basic Education is provided for men and women eighteen years of age and older not currently enrolled in a public school. Its purpose is to improve the economic and social standing of adults in the community. Persons enrolled may be learning to read and write, or they may review English, math, social studies, or science; however, the main objective of this program is to

raise adults to the educational level required for attending the adult high school classes.

There are no charges for these courses. The books are furnished by Caldwell Technical Institute.

The courses are 11 weeks in duration. Classes are scheduled to meet two nights a week with most of the classes meeting three hours each night. A student may stay in Group 1 (grades 1-4) or in Group 11 (grades 5-8) as long as he or the instructor deems it necessary. Progression is mainly individual although they are in groups. These classes are held in Caldwell, Watauga and Avery counties on a continuing basis and interested persons should contact the Adult Education Director at Caldwell Technical Institute or any education official in the public schools.

### **ADULT HIGH SCHOOL DIPLOMA PROGRAM**

The Adult High School Diploma program is not designed to compete with regular High School programs, but its primary purpose is to give mature adults who have less than a 12th grade education another opportunity to earn the High School Diploma. Students enrolled in public secondary schools are not eligible to enroll in the Adult High School program. Since Adult High School classes do not operate on a unit system, the adult student is not required to submit a transcript of High School records. However all adults regardless of the number of High School units previously earned, who enroll in the program must demonstrate proficiency in English, Math, Social Studies, and Science at the 12th grade level before they are recommended for the Adult High School Diploma.

Adult High School classes are offered in the evening program at Caldwell Technical Institute and at other locations in Caldwell, Watauga, and Avery counties. These classes usually meet two nights weekly from 6-10 P.M. New classes begin in September, January, March and June.

When students make satisfactory scores on the four subject area tests, they are recommended to the Board of Education in Caldwell, Watauga or Avery Counties to receive the Adult High School Diploma. Graduation Ceremonies will be held several times each year for the Adult Diploma.

# **COURSES OF STUDY**

CALDWELL TECHNICAL INSTITUTE OFFERS THE FOLLOWING PROGRAMS OF STUDY:

## **ASSOCIATE IN GENERAL EDUCATION DEGREE**

(see pages 68 and 69 of this catalog)

## **ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAMS**

BUSINESS ADMINISTRATION  
DRAFTING AND DESIGN TECHNOLOGY  
ELECTRONIC DATA PROCESSING  
FURNITURE PRODUCTION ASSISTANT  
LIBRARY TECHNICAL ASSISTANT PROGRAM  
RECREATIONAL THERAPY TECHNOLOGY  
SECRETARIAL SCIENCE  
EXECUTIVE SECRETARY  
MEDICAL SECRETARY

## **DIPLOMA PROGRAMS**

AUTOMOTIVE MECHANICS  
COSMETOLOGY  
ELECTRICAL INSTALLATION  
AND MAINTENANCE  
FURNITURE PRODUCTION ASSISTANT (1 YEAR)  
MACHINE SHOP (2 YEARS)  
MECHANICAL DRAFTING  
PRACTICAL NURSE EDUCATION  
TEXTILE PRODUCTION ASSISTANT  
WELDING

## **PROJECTED CURRICULA**

To provide curricula that will reflect the changing needs of our community and the training patterns for employment, Caldwell Technical Institute has the approval of the Department of Com-

munity Colleges and the State Board of Education to offer additional curricula other than those listed in the present catalog. The curricula listed below can and will be offered as demand and physical facilities are provided:

General Education

Electromechanical Mechanics

Carpentry

Textile Production (Full Time)

Manufacturing Engineering Technology

## **TECHNICAL CURRICULA**

The two-year technical curricular program is designed to prepare enrollees for technician-level occupations. More emphasis is given to theory than in vocational courses. Also, roughly one-half of the course requirements are in general education and the sciences underlying the particular occupational area.

## **BUSINESS ADMINISTRATION (T 18)**

### **Purpose of Curriculum**

In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.

### **Job Description**

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills,

checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are potentially available in business: advertising, banking, credit, finance, retailing, wholesaling, hotel, tourist, and travel industry, insurance, transportation, and communications.

## BUSINESS ADMINISTRATION

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
T-BUS 102	Typewriting .....	2	3	3
T-MAT 110	Business Mathematics .....	5	0	5
T-BUS 101	Introduction to Business .....	5	0	5
T-ECO 102	Economics .....	3	0	3
		<hr/>	<hr/>	<hr/>
		19	3	20
<b>SECOND QUARTER</b>				
T-ENG 102	Composition .....	3	0	3
T-BUS 120	Accounting .....	5	2	6
T-ECO 104	Economics .....	3	0	3
T-BUS 115	Business Law .....	3	0	3
T-BUS 123	Business Finance .....	3	0	3
		<hr/>	<hr/>	<hr/>
		17	2	18
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing .....	3	0	3
T-BUS 124	Business Finance .....	3	0	3
T-BUS 110	Office Machines .....	2	2	3
T-BUS 121	Accounting .....	5	2	6
T-BUS 116	Business Law .....	3	0	3
		<hr/>	<hr/>	<hr/>
		19	4	18
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communication .....	3	0	3
T-BUS 232	Sales Development .....	3	0	3
T-EDP 104	Introduction to Data Processing System .....	3	2	4
T-BUS 239	Marketing .....	5	0	5
	Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		17	2	18
<b>FIFTH QUARTER</b>				
T-ENG 206	Business Communication .....	3	0	3
T-BUS 243	Advertising .....	3	2	4
T-BUS 235	Business Management .....	3	0	3
	Social Science Elective .....	3	0	3
	Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		15	2	16

## SIXTH QUARTER

T-BUS 229	Taxes .....	3	2	4
T-BUS 247	Business Insurance .....	3	0	3
T-BUS 272	Principles of Supervision .....	3	0	3
T-BUS 271	Office Management .....	3	0	3
	Social Science Elective .....	3	0	3
	Elective .....	3	0	3
		<hr/> 18	<hr/> 2	<hr/> 19
	Total Quarter Hours in Courses			94
	Electives (Min.)			<hr/> 15
				Total 109

## DRAFTING AND DESIGN—MECHANICAL (T 43)

### Purpose of Curriculum

This curriculum was prepared for the purpose of outlining a training program for students of mechanical drafting and design technology. There are certain identifiable duties which are common to all technicians of this general classification and which comprise the basic areas of technical knowledge they need. This curriculum has been designed for training persons in the accepted performance of these basic duties that will be assigned, and to enable the individual student to become proficient in a short time after he becomes and employed in the industry.

Courses in general education have been included to give a student the assurance and understanding that come with education upon a broad base. The technician associates with many levels of thought and expression—administrative personnel, scientists, engineers, skilled workmen. He must be able to communicate effectively with all levels. Courses containing essential information from related subject areas, such as mathematics, physics, and mechanics have been included in order to provide the student a better academic base for his training. Emphasis is placed upon ability to think and plan. He must also be able to draw. His introduction to industry will begin on the drawing board; therefore, he must be able to perform well there.

### Job Description

Mechanical drafting and design technicians are concerned with the preparation of drawings for design proposals, for experimental models and items for production use.

These technicians perform many aspects of drafting in a specialized field, such as the developing of the drawing of a section, sub-assembly or major component. Investigating design

factors and availability of material and equipment, production methods and facilities are frequent assignments. They assist in the design of units and controls from specifications by utilizing drawings of existing units and reports on functional performance. They may draw components in industrial fields based on engineers' original design concepts or specific ideas. Also, they may be assigned as coordinators for the execution of related work of other design, production, tooling, material and planning groups. Technicians with experience in this classification may often supervise the preparation of working drawings.

The technicians are employed in many types of manufacturing, fabrication, research development and service industries. Substantial numbers also are employed in communications, transportation, public utilities, consulting engineering firms, and federal, state, and local governments.

### DRAFTING & DESIGN—MECHANICAL

#### CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
FIRST QUARTER				
T-GUI 101	Introduction to Education . . . . .	1	0	1
T-ENG 101	Grammar . . . . .	3	0	3
T-MAT 101	Technical Mathematics . . . . .	5	0	5
T-PHY 101	Physics: Properties of Matter . . . . .	3	2	4
T-DFT 101	Technical Drafting . . . . .	2	6*	4
T-MEC 101	Machine Processes . . . . .	0	6*	2
		14	14	19
SECOND QUARTER				
T-ENG 102	Composition . . . . .	3	0	3
T-MAT 102	Technical Mathematics . . . . .	5	0	5
T-PHY 102	Physics: Work, Energy, Power . . . . .	3	2	4
T-DFT 102	Technical Drafting . . . . .	2	6*	4
T-MEC 102	Machine Processes . . . . .	0	6*	2
		13	14	18
THIRD QUARTER				
T-ENG 103	Report Writing . . . . .	3	0	3
T-MAT 103	Technical Mathematics . . . . .	5	0	5
T-PHY 103	Physics: Electricity . . . . .	3	2	4
T-PHY 106	Applied Mechanics . . . . .	5	0	5
T-DFT 103	Technical Drafting . . . . .	2	6*	4
		18	8	21

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

**FOURTH QUARTER**

T-ENG 204	Oral Communication .....	3	0	3
T-DFT 201	Technical Drafting .....	2	6	4
T-DFT 204	Descriptive Geometry .....	2	4	4
T-MEC 205	Strength of Materials .....	3	2	4
T-MEC 210	Physical Metallurgy .....	3	3*	4
		<hr/>	<hr/>	<hr/>
		13	15	19

**FIFTH QUARTER**

	Social Science Elective .....	3	0	3
T-DFT 205	Design Drafting I .....	2	6*	4
T-DFT 211	Mechanisms .....	3	2	4
T-MEC 211	Physical Metallurgy .....	3	3*	4
	Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		14	11	18

**SIXTH QUARTER**

	Social Science Elective .....	3	0	3
T-DFT 206	Design Drafting II .....	2	6*	4
T-MEC 235	Hydraulics & Pneumatics .....	3	3*	4
	Elective .....	3	0	3
	Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		14	9	17

Total Quarter Hours in Courses	97
Minimum Electives	15

Total 112

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

**ELECTRONIC DATA PROCESSING (T-22)**

**Purpose of Curriculum**

The ability to process large quantities of information at high speed is a necessary prerequisite for modern technical achievements. Electronic and electromechanical systems, illustrated by the digital computer, are the most important tools for information processing, and they perform many commercial and scientific tasks too complex or too lengthy to be accomplished by manual operations alone.

Electronic data processing is that science dedicated to the solution of human problems by automatic means. These problems assume a wide variety, and computers are used for such endeavors as the maintenance of business records, the solution of mathematical and engineering problems, the control of industrial processes and tools, and the evaluation of data and languages in such fields as social science, humanities, and linguistics. Computers even find a place in such aesthetic disciplines as art and

religion, where they produce graphical displays and examine biblical texts.

Many occupational specialties are needed to control a large computer system effectively. These include the positions of key punch operator, unit record machine operator and programmer, computer operator, computer programmer, systems analyst, engineer, and supervisor. The community college data processing curriculum is especially designed to prepare students for careers as computer operators and programmers for both commercial and scientific computer systems. In addition all students are given training in the operation and programming of unit record equipment, including key punch, sorter, reproducing punch, collator, and accounting machine.

### Job Description

The data processing specialist often is called upon to perform many varied tasks in a computer center. He is required frequently to operate and program both unit record machinery and the computer system. He may be a member of a programming team, whose responsibility is to prepare programs for computer solution through joint effort. He may be asked to transform the general requirements of accountants, business managers, engineers, and mathematicians into specific programs which can be efficiently executed by the computer. At intervals he may be required to update, revise, correct, and write programs as the needs of management dictate.

## DATA PROCESSING—BUSINESS

### CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter
			Class	Lab	Hours Credit
FIRST QUARTER					
T-GUI 101	Introduction to Education .....	1	0	1	
T-ENG 101	Grammar .....	3	0	3	
T-MAT 101	Technical Mathematics .....	5	0	5	
T-EDP 100	Introduction to Computers .....	3	0	3	
T-EDP 101	Function Wiring .....	2	2	3	
T-EDP 106	Compiler Language I .....	2	2	3	
		16	4	18	
SECOND QUARTER					
T-ENG 102	Composition .....	3	0	3	
T-MAT 214	Statistics .....	5	0	5	
T-BUS 120	Accounting I .....	5	2	6	
T-EDP 108	Assembler Language .....	2	4	4	
		15	6	18	

### THIRD QUARTER

T-ENG 103	Report Writing .....	3	0	3
T-BUS 121	Accounting II .....	5	2	6
T-EDP 202	Compiler Language II .....	2	4	4
T-BUS 101	Introduction to Business .....	5	0	5
		<hr/> 15	<hr/> 6	<hr/> 18

### FOURTH QUARTER

T-ENG 204	Oral Communication .....	3	0	3
T-EDP 208	Programming Applications I .....	2	4	4
T-EDP 214	Computer Systems I .....	2	2	3
T-BUS 225	Cost Accounting .....	3	2	4
T-EDP 210	Linear Programming .....	3	2	4
		<hr/> 13	<hr/> 10	<hr/> 18

### FIFTH QUARTER

T-EDP 209	Programming Applications II .....	2	4	4
T-EDP 215	Computer Systems II .....	2	2	3
T-EDP 219	Systems and Procedures .....	3	0	3
	Social Science Elective .....	3	0	3
	Elective .....	3	0	3
		<hr/> 13	<hr/> 6	<hr/> 16

### SIXTH QUARTER

T-EDP 217	Data Processing Project .....	1	8	5
T-BUS 255	Interpreting Accounting Records ....	3	0	3
	Social Science Elective .....	3	0	3
	Business Elective .....	3	0	3
	Elective .....	3	0	3
		<hr/> 13	<hr/> 8	<hr/> 17

Total Quarter Hours in Courses	90
Electives	15
Total	<hr/> 105

## LIBRARY TECHNICAL ASSISTANT PROGRAM (T-80)

### Purpose of Curriculum

There is a growing need for men and women to assist Librarians by assuming the many technical and clerical responsibilities essential to the operation of the modern library. The Library Technical Assistant is a library worker who has graduated from a program in Library Technology, usually established in a two-year institution such as a junior college or community college, with a degree of Associate of Arts with a defined major in courses in Library Technology. He is capable of work in support of professional librarians. Under their supervision, he can be expected to have sufficient knowledge and skills to perform the assigned or routine duties in the library, and in some cases

to be capable of supervision of untrained library clerk personnel.

The Library Technical Assistant program is designed to prepare persons for employment in various types of libraries—public school, hospital, government, and industry. The curriculum provides a background of general education and basic library skills to prepare interested students to enter library work above the minimum clerk status. It also introduces a variety of library experience into which a trained person may enter, suiting abilities to the particular job. The library courses would be helpful as background for students desiring to enter the professional library field and the business courses could provide a good background for further business training. Thus, the graduate of the Library Technical Assistant program may enter a variety of career opportunities.

### Job Description—Library Technical Assistant

**DEFINITION.** Library technical assistant duties are based on skills required by the library clerk, but, in addition, a proficiency developed in one or more functional areas or in certain limited phases of library service is required. Library technical assistants will generally follow established procedures which have been developed by librarians. They work under the supervision of a librarian and may supervise and direct library clerks or clerical staff. In a closely coordinated library system, a library technical assistant may be responsible for a service unit.

In this category, there may be personnel with additional qualifications such as college credits or some courses in library service whose educational background qualifies them for more independent responsibility for limited aspects of library services.

## LIBRARY TECHNICAL ASSISTANT CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
FIRST QUARTER				
T-GUI 101	Introduction to Education . . . . .	1	0	1
T-ENG 101	Grammar . . . . .	3	0	3
T-MAT 110	Business Mathematics . . . . .	5	0	5
T-BUS 102	Typewriting . . . . .	2	3	3
T-LIB 101	Introduction and Orientation to Library Services . . . . .	3	2	4
	Science Elective . . . . .	3	0	3
		<hr/> 17	<hr/> 5	<hr/> 19

## SECOND QUARTER

T-ENG 102	Composition .....	3	0	3
T-BUS 103	Typewriting .....	2	3	3
T-BUS 120	Accounting .....	5	2	6
T-LIB 102	Book Selection and Order			
	Procedure .....	3	2	4
	Science Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		16	7	19

## THIRD QUARTER

T-ENG 103	Report Writing .....	3	0	3
T-BUS 104	Typewriting .....	2	3	3
T-BUS 110	Office Machines .....	2	2	3
T-LIB 102	Library Reference .....	3	0	3
T-HUM 101	Humanities .....	4	0	4
T-BUS 134	Personal Development .....	3	0	3
		<hr/>	<hr/>	<hr/>
		17	5	19

## FOURTH QUARTER

T-ENG 204	Oral Communication .....	3	0	3
T-EDP 104	Introduction to Data Processing .....	3	2	4
T-LIB 201	Introduction to Classification			
	and Cataloging-Filing .....	3	2	4
T-HUM 102	Humanities .....	4	0	4
	Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		16	4	18

## FIFTH QUARTER

T-LIB 202	Library Circulation Routines .....	3	0	3
T-BUS 214	Secretarial Procedures .....	3	2	4
T-HUM 103	Humanities .....	4	0	4
T-LIB 203	Library Practice .....	0	6	3
	Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		13	8	17

## SIXTH QUARTER

T-AUD 101	Audio Visual Materials .....	2	3	4
T-LIB 204	Library Practice .....	0	6	3
T-POL 103	Government .....	5	0	5
T-HIS 201	Geography .....	3	0	3
	Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		13	9	18

Total Quarter Hours in Course	96
Electives	13
Total	<hr/> 109

## FURNITURE PRODUCTION ASSISTANT (T 75)

### (Degree Program)

### Purpose of Curriculum

The curriculum guide was prepared in cooperation with CTI and the area Furniture Committee. The purposes of this program are to develop the following competencies:

1. Better performance of the student on the job.
2. Train for a specific production or staff job in local Furniture Industry.
3. Train for jobs in production operations.
4. Knowledge of supervisory responsibilities as they apply to production requirements.
5. Knowledge in specific elements of technical operations.
6. Understanding the principles of organization and production operation of the furniture industry.

### Job Description

The graduate of this program may serve in many areas of the local furniture industry. These areas would include: Assistant to Plant Manager, Methods Improvement, Quality Control Inspector, Cost Estimators, Product Engineer Trainee, Production Control Trainee, Material Control Supervisor, Department Supervisor, Production Scheduling and Control, Material Testing, Employee Trainer, and Industrial Safety.

## FURNITURE PRODUCTION ASSISTANT

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
T-MAT 110	Business Mathematics .....	5	0	5
T-FURN 104	Characteristics of Wood .....	2	0	2
T-DFT 101	Drafting .....	2	5	4
T-FURN 108	Production Equipment I .....	4	0	4
T-FURN 105	Glues .....	1	0	1
		18	5	20
<b>SECOND QUARTER</b>				
T-ENG 102	Composition .....	3	0	3
T-FURN 109	Production Equipment II .....	4	0	4
T-FURN 102	Construction & Billing I .....	1	3	2
T-DFT 102	Drafting .....	2	6	4
T-PSY 206	Applied Psychology .....	3	0	3
		13	9	16
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing .....	3	0	3
T-FURN 103	Construction & Billing II .....	1	3	2
T-BUS 101	Introduction to Business .....	5	0	5
T-FURN 106	Abrasive Material & Method .....	2	2	3
T-DFT 103	Drafting .....	2	5	4
		13	10	17

#### FOURTH QUARTER

T-ENG 204	Oral Communication .....	3	0	3
T-ISC 201	Industrial Organization & Management .....	3	0	3
T-BUS 272	Principal of Supervision .....	3	0	3
T-BUS 111	Collecting & Reporting Info. ....	2	2	3
T-FURN 107	Finishing Method & Material .....	2	2	3
T-FURN 112	Routing, Scheduling & Process .....	2	2	3
		<hr/> 15	<hr/> 6	<hr/> 18

#### FIFTH QUARTER

	Social Science Elective .....	3	0	3
T-ISC 103	Production Control .....	1	3	2
T-BUS 285	Cost Records & Estimates .....	2	0	2
T-ISC 102	Industrial Safety .....	3	0	3
T-ISC 203	Motion Study .....	3	2	4
	Elective .....	3	0	3
		<hr/> 15	<hr/> 5	<hr/> 17

#### SIXTH QUARTER

	Social Science Elective .....	3	0	3
T-ISC 207	Foremanship Supervision .....	3	0	3
T-ECO 102	Economics .....	3	0	3
T-ISC 202	Quality Control .....	3	0	3
T-ISC 204	Value Analyst .....	3	0	3
	Elective .....	3	0	3
		<hr/> 18	<hr/> 0	<hr/> 18

Total Quarter Hours in Course	94
Electives	12
Total	<hr/> 106

### RECREATIONAL THERAPY TECHNOLOGY (T 83)

#### Purpose of Curriculum

In recent years much national, state, and local attention has been focused on the lack of recreation services offered our ill and disabled citizens. With this increased emphasis, community and institutional recreation agencies and others are developing new and creative programs for the handicapped which require trained recreation leaders at all levels.

This curriculum is designed to provide recreational therapy technicians to work with the handicapped on the leadership or activity level. Major emphasis of the curriculum is placed on developing specific activity skills in arts and crafts, sports and games, music, drama, dance, and social recreation. The curriculum also provides courses which develop the students' understanding of the limitations and abilities of the handicapped as well as the techniques and skills in the adaptation of recreation

activities. Student placement in various settings (hospitals for mentally ill, mentally retarded, alcoholic etc., community recreation programs) is also an integral part of the program.

### Job Description

The graduate of the Recreational Therapy Technology Curriculum may enter a variety of careers in the field of recreation. In most situations the technician will work under the supervision of a professional recreator.

The majority of job opportunities for the recreational therapy technicians is available in the state institutions for the handicapped (mentally retarded, mentally ill, alcoholics, and correctional centers, etc.) but more and more community recreation departments and volunteer agencies are beginning to employ persons to work in recreation with the handicapped. The technician would also possess the skills and background knowledge to work as an activity director in sports activities, arts and crafts and others, or to supervise and conduct programs for various recreation facilities in public, private, commercial, industrial, and institutional settings. The qualifications for different agencies vary, but most all recreation agencies offer positions at the technical level.

## RECREATIONAL THERAPY TECHNOLOGY

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
T-REC 101	Introduction to Recreation Services	3	0	3
T-REC 102	Introduction to the Ill & Handicapped	3	0	3
T-REC 108	Medical Terminology & Basic Anatomy .....	3	0	3
T-REC 109	First Aid & Safety .....	3	0	3
T-REC 110	Recreational Arts & Crafts .....	1	4	3
		17	4	19
<b>SECOND QUARTER</b>				
T-ENG 102	Composition .....	3	0	3
T-REC 121	Social Recreation .....	3	0	3
T-REC 103	Adaptive Phy. Ed. & Rec. Act. ....	2	2	3
T-REC 104	Recreation & the Treatment Team ..	3	0	3
T-AUD 101	Audio-Visual Aids .....	2	3	4
T-MUS 101	Recreational Music .....	1	4	3
		14	9	19

### THIRD QUARTER

T-ENG 103	Report Writing .....	3	0	3
T-REC 105	Recreational Areas & Facilities and Program Planning .....	3	0	3
T-REC 106	Resident & Day Camp Adm. ....	3	0	3
T-REC 107	Team Sports & Games In Rec. ....	1	6	4
T-SOC 201	Intro. to Sociology .....	3	0	3
T-REC 207	Practicum .....	0	6	2
		<hr/> 13	<hr/> 12	<hr/> 18

### FOURTH QUARTER

T-ENG 204	Oral Communication .....	3	0	3
T-REC 201	Recreation Administration .....	3	0	3
T-SSC 205	American Institutions .....	3	0	3
T-REC 203	Water-Related Sports & Act. ....	1	4	3
T-MUS 201	Folk, Square & Social Dance ....	1	4	3
T-REC 208	Practicum .....	0	8	3
		<hr/> 11	<hr/> 16	<hr/> 18

### FIFTH QUARTER

T-SSC	Social Science Elective .....	3	0	3
T-REC 202	Recreational Leadership .....	3	0	3
T-PSY 210	Child Growth & Development .....	3	0	3
T-BUS 272	Effective Supervisory Practices ....	3	0	3
T-REC 204	Individual Sports & Games .....	1	4	3
T-REC 209	Practicum .....	0	8	3
		<hr/> 13	<hr/> 12	<hr/> 18

### SIXTH QUARTER

	Social Science Elective .....	3	0	3
T-REC 206	Recreational Drama .....	1	4	3
T-REC 205	Nature & Outdoor Recreation .....	3	0	3
T-REC 210	Practicum .....	0	24	8
		<hr/> 7	<hr/> 28	<hr/> 17

Total Quarter Hours in Courses	103
Electives	6
Total	<hr/> 109

## SECRETARIAL SCIENCE

(Medical and Executive)  
(T 32) (T 30)

### Purpose of Curriculum

The demand for better qualified secretaries in our ever-expanding business, industry, government, and professional world is becoming more acute. The purpose of these curricula is to outline a training program that will provide training in the accepted procedures required by the business, industrial and

professional areas and to enable persons to become proficient soon after employment in their particular field.

Each of the above listed curricula is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the particular area of work. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development. Courses designated by an asterick (\*) will be oriented to the major area such as medical or executive.

### Job Description

The graduates of these programs should have a knowledge of the terminology peculiar to the major area, skill in dictation and accurate transcription of all correspondence, memoranda, and reports. The graduate may be employed as a stenographer or secretary in a variety of offices in businesses such as insurance companies, banks, marketing, institutions, financial firms, doctors' offices, medical and health institutions, and government agencies.

## SECRETARIAL SCIENCE CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
T-BUS 102	Typewriting .....	2	3	3
T-MAT 110	Business Mathematics .....	5	0	5
T-BUS 101	Introduction to Business .....	5	0	5
T-BUS 106	Shorthand .....	3	2	4
		19	5	21
<b>SECOND QUARTER</b>				
T-ENG 102	Composition .....	3	0	3
T-BUS 103	Typewriting .....	2	3	3
T-BUS 107	Shorthand .....	3	2	4
T-BUS 120	Accounting .....	5	2	6
T-BUS 115	Business Law .....	3	0	3
		16	7	19
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing .....	3	0	3
T-BUS 104	Typewriting .....	2	3	3
T-BUS 108	Shorthand .....	3	2	4
T-BUS 110	Office Machines .....	2	2	3
T-BUS 134	Personal Development .....	3	0	3
		13	7	16

#### FOURTH QUARTER

T-ENG 204	Oral Communications .....	3	0	3
*T-BUS 206E	Dictation and Transcription (Executive) .....	3	2	4
*T-BUS 206M	Dictation and Transcription (Medical) .....	3	2	4
T-BUS 205	Advanced Typewriting .....	2	3	3
T-BUS 211	Office Machines .....	2	2	3
T-EDP 104	Introduction to Data Processing Systems .....	3	2	4
*T-BUS 183M	Terminology and Vocabulary (Medical) .....	3	0	3
	Elective (Executive) .....	3	0	3
	Executive	16	9	20
	Medical	16	9	20

#### FIFTH QUARTER

T-ENG 206	Business Communications .....	3	0	3
*T-BUS 207E	Dictation and Transcription (Executive) .....	3	2	4
*T-BUS 207M	Dictation and Transcription (Medical) .....	3	2	4
T-BUS 214	Secretarial Procedures .....	3	2	4
T-BUS 219	Credit Procedures and Problems (Executive) .....	3	0	3
*T-BUS 284M	Terminology and Vocabulary (Medical) .....	3	0	3
	Social Science Elective .....	3	0	3
	Executive	15	4	17
	Medical	15	2	17

#### SIXTH QUARTER

*T-BUS 208E	Dictation and Transcription (Executive) .....	3	2	4
*T-BUS 208M	Dictation and Transcription (Medical) .....	3	2	4
T-BUS 271	Office Management .....	3	0	3
T-BUS 247	Business Insurance .....	3	0	3
	Social Science Elective .....	3	0	3
	Elective .....	3	0	3
	Executive	15	2	16
	Medical	15	2	16

Total Quarter Hours in Courses	Medical	Executive
	100	97
Electives (Min.)	9	12
Total	109	109

\* These courses will be oriented to the major area, Medical or Executive.

### VOCATIONAL CURRICULA

One year diploma programs designed to prepare enrollees for trade level occupations. Much emphasis is given to the development of manipulative skills.

## AUTOMOTIVE MECHANICS (V 03)

### Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobiles comes in class assignments, discussion, and shop practice.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks and a variety of gasoline-powered equipment. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

### Job Description

Automobile mechanics maintain and repair mechanical, electrical and other parts of passenger cars and trucks. In some communities and rural areas, they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore vehicle or machine to proper operating condition.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of tests and repair work. For example, some may specialize in repairing only electrical tune-up, power steering, and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

## AUTOMOTIVE MECHANICS

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
PME 1101	Internal Combustion Engine .....	4	15	9
MAT 1101	Fundamentals of Math .....	5	0	5
ENG 1101	Reading Improvement .....	2	0	2
PSY 1101	Human Relations .....	3	0	3
		15	15	20

## SECOND QUARTER

PME 1102	Electrical and Fuel Systems .....	5	14	10
ENG 1102	Communication Skills .....	3	0	3
PHY 1101	Applied Science .....	3	2	4
DFT 1101	Schematics and Diagrams .....	0	3	1
		<hr/>	<hr/>	<hr/>
		11	19	18

## THIRD QUARTER

AUT 1123	Chassis and Suspension Systems ....	3	11	7
AUT 1121	Braking System .....	3	3	4
AHR 1101	Automotive Air Conditioning .....	2	3	3
PHY 1102	Applied Science .....	3	2	4
		<hr/>	<hr/>	<hr/>
		11	19	18

## FOURTH QUARTER

AUT 1124	Power Train System .....	3	9	6
AUT 1125	Automotive Servicing .....	3	9	6
WLD 1101	Basic Gas Welding .....	0	3	1
BUS 1103	Small Business Operations .....	3	0	3
		<hr/>	<hr/>	<hr/>
		9	21	16

## COSMETOLOGY (V 09)

### Purpose of Curriculum

Today the cosmetologist is called upon to advise men and women on problems of make-up, diet, and care of the hair, skin and hands, including the nails. Cosmetology has become a science consisting of the use of cosmetics based on scientific principles. The Cosmetology Curriculum is designed to prepare the student for employment in the field of cosmetology. The curriculum provides instruction and practice in manicuring, shampooing, permanent waving, facials, massages, scalp treatments, hair shaping, and styling. This curriculum is approved by the North Carolina State Board of Cosmetic Art Examiners.

The first quarter of instruction consists of an introduction to Cosmetology including the fundamentals of ethics, history theory, and practice. The class activities include practical lessons, lectures, demonstrations, student practice on wefts and manequins.

The second quarter of instruction places more emphasis on manipulative skills. The acquisition of correct habits and skills is stressed. Practical work is done almost exclusively on patrons and models.

The third quarter correlates theory with practice in the study of related subjects and developing more advanced artistic skills.

In the fourth quarter the students are capable of doing work and are equipped for the state examination and outside work.

Each student, prior to finishing an application to the Cosmetic Arts Board for examination, is given a test both theoretical and practical.

For additional information pertaining to rules and regulations governing the Cosmetology program we refer you to Chapter 354, Public Law 1943. This publication may be obtained by writing to North Carolina State Board of Cosmetic Art Examiners, Box 1108, Raleigh, North Carolina.

## Job Description

A trained beautician is in constant demand. She can find employment in the many beauty shops found in every community. A cosmetologist performs many functions in providing beauty services for customers. Some of the functions are manicuring, shampooing, hair shaping, hair styling, hair coloring, finger waving, wig care, rinses, permanent waving, facials, scalp treatments, bleaching, and other services demanded of a beautician.

## COSMETOLOGY

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
COS 1101	Introduction to Cosmetology .....	5	1	5
COS 1102	Bacteriology, Sanitation, and First Aid .....	5	2	6
COS 1103	Shampoo and Rinse .....	0	2	1
COS 1105	Finger Waving and Pin Curling ....	1	9	4
COS 1107	Manicuring .....	1	2	2
BUS 1134	Personal Development .....	3	0	3
		16	16	22
<b>SECOND QUARTER</b>				
COS 1111	Hair Styling and Wig Care .....	2	9	5
COS 1115	Tinting and Bleaching .....	1	8	4
COS 1106	Hair Shaping .....	1	9	4
ENG 1102	Communication Skills .....	3	0	3
		7	26	16
<b>THIRD QUARTER</b>				
COS 1110	Permanent Waving—Cold and Heat Wave .....	2	15	7
COS 1118	Anatomy I .....	3	2	4
COS 1120	Facials .....	1	5	3
PSY 1101	Human Relations .....	3	0	3
		9	22	17

**FOURTH QUARTER**

COS 1116	Scalp Treatments .....	1	2	2
COS 1119	Anatomy II .....	2	4	3
COS 1121	Disorders of Skin, Nails, & Hair .....	5	3	6
COS 1122	Electricity .....	3	1	3
COS 1123	Chemistry .....	2	1	2
BUS 1103	Small Business Operations .....	3	0	3
	Elective .....	3	0	3
		<hr/>	<hr/>	<hr/>
		19	11	22

**DRAFTING—MECHANICAL (V 17)**

**Purpose of Curriculum**

This curriculum is designed to prepare students to enter the field of mechanical drafting. The first two quarters contain courses basic to all fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter mechanical drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel—administrative, architects, engineers, skilled workmen—and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics and industrial organization are provided to assist the student in developing understanding and confidence in his relations with other persons.

**Job Description**

A draftsman prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions: makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of triangle and other drafting tools. Lays tracing paper on drawing and traces drawing in pencil or ink. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

A mechanical draftsman performs the general duties of a draftsman and also specializes in making rough freehand and mechanical drafting sketches of proposed mechanical devices, and the drawing of necessary details. Prepares accurate scale drawings of parts or machines from specifications.

## DRAFTING—MECHANICAL

### CURRICULUM BY QUARTERS

			Hours Per Week	Quarter Hours	
Course Title			Class	Lab	Credit
FIRST QUARTER					
T-GUI 101	Introduction to Education	1	0	1	
DFT 1121	Drafting	3	15	8	
MAT 1103	Geometry	3	0	3	
ENG 1101	Reading Improvement	2	0	2	
PSY 1101	Human Relations	3	0	3	
		12	15	17	
SECOND QUARTER					
DFT 1122	Drafting	3	6	5	
DFT 1125	Descriptive Geometry	2	3	3	
MAT 1102	Algebra	5	0	5	
ENG 1102	Communication Skills	3	0	3	
PHY 1101	Applied Science	3	2	4	
		16	11	20	
THIRD QUARTER					
DFT 1131	Mechanical Drafting	3	9	6	
MAT 1104	Trigonometry	3	0	3	
PHY 1102	Applied Science	3	2	4	
MEC 1113	Shop Processes	2	3	3	
MEC 1115	Treatment of Ferrous Metals	2	3	3	
		13	17	19	
FOURTH QUARTER					
DFT 1132	Mechanical Drafting	3	12	7	
MEC 1114	Shop Processes	2	3	3	
MEC 1116	Treatment of Nonferrous Metals	2	3	3	
BUS 1105	Industrial Organizations	3	0	3	
BUS 1103	Small Business Operations	3	0	3	
		13	18	19	

## ELECTRICAL INSTALLATION AND MAINTENANCE (V 18)

On the completion of the Electrical Installation and Maintenance Course, one would be prepared to enter into the electrical field as an assistant electrician in any of two general areas.

1. **Construction area:** This would include new wiring, rewiring of residential, commercial, and industrial buildings.
2. **Maintenance area:** This would include installation and maintenance of motors, motor controls and industrial electronics.

He will have acquired a basic knowledge of the National Electrical Code—as to wiring design, wiring methods, materials and equipment for general uses. He will have developed a skill in using electrical prints, trouble-shooting, electrical controls and the repair of electrical and electronic equipment. He will have acquired a basic knowledge of business procedures and organization.

Within four to six years upon completion of this course and with dedication to one's work, he will become a highly skilled electrician craftsman in his area.

## ELECTRICAL INSTALLATION AND MAINTENANCE

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
FIRST QUARTER				
T-GUI 101	Introduction to Education .....	1	0	1
ELC 1112	Direct and Alternating Current ....	4	12	8
ENG 1101	Reading Improvement .....	2	0	2
MAT 1115	Electrical Math .....	5	0	5
PSY 1101	Human Relations .....	3	0	3
DFT 1110	Blueprint Reading: Building Trade ..	0	3	1
		15	15	20
SECOND QUARTER				
ELC 1113	Alternating and Direct Current Machines and Controls .....	5	14	10
ENG 1102	Communication Skills .....	3	0	3
DFT 1113	Blueprint Reading: Electrical .....	0	3	1
PHY 1101	Applied Science .....	3	2	4
		11	19	18
THIRD QUARTER				
ELC 1124	Residential Wiring .....	5	9	8
ELC 1125	Commercial and Industrial Wiring ..	2	9	5
PHY 1102	Applied Science .....	3	2	4
		10	20	17
FOURTH QUARTER				
ELN 1118	Industrial Electronic Fundamentals .	4	8	7
ELN 1119	Industrial Electronic Controls .....	4	11	8
BUS 1103	Small Business Operations .....	3	0	3
		11	19	18

## FURNITURE PRODUCTION ASSISTANT (V 40)

### (Diploma Program)

This curriculum was developed by the Furniture Industry Advisory Committee and this Institute with the primary purpose of better performance on the job. This would include people who have Furniture Production jobs, but want to improve themselves, and people without jobs who want to become qualified to obtain one.

Graduates of this curriculum will be awarded an appropriate diploma and may transfer credit into the degree program if they desire to do so. They may serve the industry as machine operations checker, stock control man, expeditor, sub-foreman, drafting, liaison man, production control clerk, section or group leader, supervisory trainee, project man, sample man, and bill out man.

## FURNITURE PRODUCTION ASSISTANT

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
T-DFT 101	Technical Drafting .....	2	5	4
T-FURN 104	Characteristics of Woods .....	2	0	2
T-FURN 107	Finishing Methods .....	2	2	3
T-FURN 108	Production Equipment I .....	3	0	3
T-PSY 206	Applied Psychology .....	3	0	3
		<hr/> 13	<hr/> 7	<hr/> 16
<b>SECOND QUARTER</b>				
T-DFT 102	Technical Drafting .....	2	6	4
T-FURN 102	Construction and Billing I .....	1	3	2
T-FURN 109	Production Equipment II .....	4	0	4
T-FURN 105	Glues .....	1	0	1
T-ISC 201	Industrial Org. & Management ....	3	0	3
		<hr/> 11	<hr/> 9	<hr/> 14
<b>THIRD QUARTER</b>				
T-FURN 103	Construction and Billing II .....	1	3	2
T-ISC 203	Motion Study .....	3	2	4
T-FURN 106	Abrasive Material and Method ....	2	2	3
T-ISC 202	Quality Control .....	3	0	3
T-FURN 112	Routing, Scheduling & Processing ..	2	2	3
		<hr/> 11	<hr/> 9	<hr/> 15

**FOURTH QUARTER**

T-ISC 103	Production Control .....	1	3	2
T-BUS 285	Cost Records and Estimation .....	2	0	2
T-BUS 111	Collecting and Reporting Information .....	2	2	3
T-ISC 207	Supervisory Responsibilities .....	3	0	3
T-DFT 103	Technical Drafting .....	2	5	4
		<hr/>	<hr/>	<hr/>
		10	10	14

**PRACTICAL NURSING EDUCATION (V 38)**

**Purpose of Curriculum**

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand an increased number of well-trained personnel for health services. Realizing this need, the State Department of Community Colleges, in conjunction with local hospitals, administers programs of practical nurse education in local school systems, community colleges and technical institutes throughout the state.

The aim of the Practical Nurse Education Program is to make available to qualified persons the opportunity to prepare for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Students are selected on the basis of demonstrated aptitude for nursing as determined by pre-entrance tests, interviews with faculty members, high school record, character references, and reports of medical and dental examinations.

Throughout the one-year program, the student is expected to grow continuously in acquisition of knowledge and understandings related to nursing, the biological sciences, the social sciences, and in skills related to nursing practice, communications, interpersonal relations, and use of good judgment. Evaluation of student performance consists of tests on all phases of course content, evaluation of clinical performance, and evaluation of adjustment to the responsibilities of nursing. A passing score is required on all graded work, plus demonstrated progress in application of nursing skills to actual patient care.

**Job Description**

Graduates of accredited programs of practical nurse education are eligible to take the licensing examination given by the North Carolina Board of Nursing. This examination is given three times each year, usually in April, June, and October. A passing score entitles the individual to receive a license, and to use a

legal title "Licensed Practical Nurse." The licsense must be renewed every two years.

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices, and, in some localities, public health facilities. In all situations, the LPN functions under supervision of a registered nurse and/or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understandings of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

**THE BANNER ELK PROGRAM OF  
PRACTICAL NURSE EDUCATION**

Caldwell Technical Institute operates an additional Practical Nurse Education Program at Banner Elk, North Carolina. The clinical practice for this program is held in the Charles A. Cannon Jr. Memorial Hospital, Banner Elk, North Carolina. The nursing students are provided free meals, rooms (Female students only), and health services by the hospital. Classes are held in the nurses' dormitory located on the Lees McRae College campus. The course of study is exactly as stated below.

**PRACTICAL NURSING  
CURRICULUM BY QUARTERS**

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
FIRST QUARTER				
T-GUI 101	Introduction to Education .....	1	0	1
PSY 1101	Human Relations .....	3	0	3
NUR 1101	Basic Science .....	5	4	6
BUS 1134	Personal Development .....	3	0	3
NUR 1102	Introduction to Patient Care .....	6	6	8
MAT 1101N	Mathematics .....	3	0	3
		<hr/>	<hr/>	<hr/>
		21	10	24

SECOND QUARTER

NUR 1103	Medical-Surgical Nursing I .....	4	0	4
NUR 1104	Hospital Care of Patients* .....	0	24	8
NUR 1109	Maternal & Infant Care .....	4	0	4
NUR 1110	Care of Infants & Children .....	4	0	4
		<hr/> 12	<hr/> 24	<hr/> 20

THIRD QUARTER

NUR 1105	Medical-Surgical Nursing II .....	9	0	9
NUR 1106	Hospital Care of Patients* .....	0	24	8
NUR 1111	Drug Administration .....	3	0	3
		<hr/> 12	<hr/> 24	<hr/> 20

FOURTH QUARTER

NUR 1107	Medical-Surgical Nursing III .....	12	0	12
NUR 1108	Hospital Care of Patients* .....	0	24	8
		<hr/> 12	<hr/> 24	<hr/> 20

\* This may be one or combination of clinical experiences in Obstetrical, Pediatric, or Medical-Surgical Nursing.

TEXTILE PRODUCTION (V 47)

Purpose of Curriculum

This program in Textile Production is designed to provide training for individuals employed or who are seeking employment in the textile industry. It is designed to provide the individual with the basic knowledge and skills necessary to enter into or to advance into the more responsible positions requiring leadership ability and a thorough knowledge of textile operations. Courses are included in this program to provide the individual with an understanding of the manufacturing process from the raw product to finished material. Courses such as Textile Fiber, Yarn Manufacturing, Weaving, Knitting, Fabric Design and Analysis, and Textile Testing are designed with laboratories to provide experiences in the practical as well as the theoretical aspects of the industry. The program concludes with courses in Industrial Organizations, Supervisory Responsibility, Cost Records and Cost Estimates, Production Control, and Work Measurement to provide the individual with the background and knowledge for advancement into supervisory responsibilities.

The textile industry is North Carolina's leading employer. Its demand for trained personnel in the production phase has greatly increased over the past few years. Many job opportunities are available in responsible jobs in production and textile testing for the graduate of this program.

**TEXTILE PRODUCTION**  
**CURRICULUM BY QUARTERS**  
**Part Time**

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
MAT 1101	Fundamentals of Mathematics .....	5	0	5
TEX 1104	Textile Fibers .....	2	2	3
		<hr/> 8	<hr/> 2	<hr/> 9
<b>SECOND QUARTER</b>				
TEX 1101	Yarn Manufacturing I .....	3	3	4
ISC 1001	Industrial Safety .....	3	0	3
ENG 1101	Reading Improvement .....	2	0	2
		<hr/> 8	<hr/> 3	<hr/> 9
<b>THIRD QUARTER</b>				
ENG 1102	Communication Skills .....	3	0	3
TEX 1108	Yarn Manufacturing II .....	5	6	7
		<hr/> 8	<hr/> 6	<hr/> 10
<b>FOURTH QUARTER</b>				
TEX 1110	Knitting .....	3	3	4
PHY 1101	Applied Science .....	3	2	4
		<hr/> 6	<hr/> 5	<hr/> 8
<b>FIFTH QUARTER</b>				
TEX 1106	Weaving .....	2	3	3
PHY 1102	Applied Science .....	3	2	4
		<hr/> 5	<hr/> 5	<hr/> 7
<b>SIXTH QUARTER</b>				
TEX 1120	Fabric Design and Analysis .....	3	3	4
PSY 1101	Human Relations .....	3	0	3
BUS 1105	Industrial Organization .....	3	0	3
		<hr/> 9	<hr/> 3	<hr/> 10
<b>SEVENTH QUARTER</b>				
TEX 1115	Textile Testing .....	3	3	4
ISC 1110	Production Control .....	3	2	4
		<hr/> 6	<hr/> 5	<hr/> 8
<b>EIGHTH QUARTER</b>				
ISC 1123	Work Measurement .....	3	2	4
ISC 1125	Supervisory Responsibility .....	3	0	3
ISC 1121	Cost Records and Cost Estimates ..	3	0	3
		<hr/> 9	<hr/> 2	<hr/> 10

## **MACHINIST (V 32)**

### **Purpose of Curriculum**

This curriculum was prepared to meet a definite need for training of machinists. Surveys show that many existing industries lack time and facilities for training enough machinists to meet present and future needs. Expanding industries located in our State and new industries invariably express the need for skilled craftsmen who have the background, knowledge, and potential to advance.

This program will give students the opportunity to acquire skills and related information necessary to gain employment in the machine shop industry.

### **Job Description**

The Machine Shop is the backbone of our present economy and requires a special skilled worker to perform the complex operations involved. The machinist is the skilled worker who shapes metal parts by using machine tools and proper total shop practice. His training and work experience enables him to plan and carry through the operations needed in turning out a machined product. A machinist is able to select the proper tools, materials, and methods required for each job and to plan the cutting and finishing operations called for on the blueprint or written instructions. He is able to make most standard shop computations related to tooling, feeds, speeds, and dimensions of the work. He is able to use precision measuring instruments such as micrometers, vernier calipers, vernier height gages, and indicators to maintain accuracies of his work to, sometimes, within thousandths of an inch.

The skilled worker must be able to set up and operate most types of machine tools such as drill presses, lathes, milling machines, boring machines, and grinders. In addition to most "standard" machines, he also spends time setting up and operating some more productive machines such as numerical tape controlled machines, turret lathes and automatic screw machines. He also becomes familiar with the composition of metals so as to be able to select, heat treat and quench parts to improve their mechanical properties.

His wide knowledge enables him to turn a piece of metal into an intricate, precise final product.

# MACHINE SHOP

## CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
FIRST QUARTER				
T-GUI 101	Introduction to Education .....	1	0	1
MEC 1101	Machine Processes .....	3	12	7
MAT 1101	Fundamentals of Mathematics .....	5	0	5
DFT 1104	Blueprint Reading & Sketching .....	0	3	1
ENG 1101	Reading Improvement .....	2	0	2
PSY 1101	Human Relations .....	3	0	3
		14	15	19
SECOND QUARTER				
MEC 1102	Machine Processes .....	3	11	7
PHY 1101	Applied Science .....	3	2	4
DFT 1105	Blueprint Reading & Sketching .....	0	3	1
MAT 1102	Algebra .....	5	0	5
ENG 1102	Communication Skills .....	3	0	3
		14	16	20
THIRD QUARTER				
MEC 1103	Machine Processes .....	3	12	7
PHY 1102	Applied Science .....	3	2	4
DFT 1106	Blueprint Reading & Sketching .....	0	3	1
MAT 1104	Trigonometry .....	3	0	3
ECO 1101	Economics .....	3	0	3
		12	17	18
FOURTH QUARTER				
MEC 1104	Machine Processes .....	3	12	7
MAT 1123	Math: Machinist .....	3	0	3
MEC 1117	Structure of Metals .....	3	2	4
BUS 1105	Industrial Organization .....	3	0	3
		12	14	17
FIFTH QUARTER				
MEC 1118	Advanced Machine Processes .....	3	12	7
WLD 1126	Welding .....	2	4	3
MEC 1115	Treatment of Ferrous Metals .....	2	3	3
MEC 1120	Machine Repair .....	1	3	2
		8	22	15
SIXTH QUARTER				
MEC 1119	Advanced Machine Processes .....	3	9	6
MEC 1116	Treatment of Non-Ferrous Metals ..	2	3	3
MEC 1121	Machine Repair .....	1	3	2
MEC 1122	Production Procedures .....	4	3	5
		10	18	16

## WELDING (V 50)

### Purpose of Curriculum

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques and skills essential for successful employment in the welding field, and skills essential in metals industry.

### Job Description

The principal duty of the welder who uses manual techniques is to control the fusion of metals by directing the heat from either an electric arc or gas welding torch and to add filler metal where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, mathematics, basic metallurgy, and blueprint reading.

A well-trained welder may find employment in many different industries. Shipbuilding, automotive, aircraft, guided missiles, railroad, tank construction, and pipe fitting industries are examples of manufacturing concerns which employ welders.

## WELDING

### CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
FIRST QUARTER				
T-GUI 101	Introduction to Education .....	1	0	1
WLD 1120	Oxyacetylene Welding and Cutting ..	3	13	7
MAT 1101	Fundamentals of Math .....	5	0	5
PSY 1101	Human Relations .....	3	0	3
ENG 1101	Reading Improvement .....	2	0	2
DFT 1104	Blueprint Reading: Mechanical .....	0	3	1
		<hr/> 14	<hr/> 16	<hr/> 19
SECOND QUARTER				
WLD 1121	Arc Welding .....	3	12	7
MAT 1103	Geometry .....	3	0	3
DFT 1117	Blueprint Reading: Welding .....	0	3	1
ENG 1102	Communication Skills .....	3	0	3
PHY 1101	Applied Science .....	3	2	4
		<hr/> 12	<hr/> 17	<hr/> 18
THIRD QUARTER				
WLD 1123	Inert Gas Welding .....	1	3	2
WLD 1124	Pipe Welding .....	3	12	7
PHY 1102	Applied Science .....	3	2	4
DFT 1118	Pattern Development and Sketching ..	0	3	1
WLD 1112	Mechanical Testing and Inspection ..	1	3	2
		<hr/> 8	<hr/> 23	<hr/> 16

**FOURTH QUARTER**

WLD 1122	Commercial and Industrial Practices	3	9	6
WLD 1125	Certification Practices	3	6	5
MEC 1117	Structure of Metals	3	2	4
BUS 1105	Industrial Organization	3	0	3
		<hr/>	<hr/>	<hr/>
		12	17	18

**ASSOCIATE IN GENERAL EDUCATION  
DEGREE**

Caldwell Technical Institute has offered the General Education Degree courses since 1967. The program is designed for students interested in a broad two year program of college-level General Education. This program provides the basic freshmen and sophomore level courses found in most college curricula.

When a student has completed the two years of basic General Education requirements and accumulated additional elective courses totaling 96 quarter hours, he will be granted the two year Associate in General Education Degree.

**ASSOCIATE IN GENERAL EDUCATION DEGREE**

**Curriculum By Quarters**

**FRESHMAN YEAR**

**FIRST QUARTER**

	Course Title	Quarter Hours Credit
ENG 101	College English	3
HIS 101	World Civilization	3
SCI 101	Physical Science	3
MATH 101	Introduction to Mathematics	5
PHY. ED. 101	Physical Education	1
GUID. 101	Introduction to Education	1
		<hr/>
		16

**SECOND QUARTER**

	Course Title	Quarter Hours Credit
ENG 102	Grammar and Composition	3
HIS 102	World Civilization	3
PHY. ED. 102	Man and His Physical Environment	3
SPEECH 101	Fundamentals of Speech	3
GEO 101	Physical Geography	4
PHY. ED.	Physical Education	1
		<hr/>
		17

THIRD QUARTER

	Course Title	Quarter Hours Credit
ENG 103	Grammar and Composition .....	3
HIS 103	World Civilization .....	3
PHY. SCI 103	Man and His Physical Environment .....	3
GEO 102	Geography .....	3
PSY 201	General Psychology .....	3
PHY. ED.	Physical Education .....	1
		<hr/> 18

SOPHOMORE YEAR

FOURTH QUARTER

	Course Title	Quarter Hours Credit
ENG 201	English Masterpieces .....	3
BIO 201	General Zoology .....	4
ELEC (3)		9
		<hr/> 16

FIFTH QUARTER

	Course Title	Quarter Hours Credit
ENG 202	English Masterpieces .....	3
BIO 202	General Botany .....	4
PHI 202	Introduction to Philosophy .....	3
ELEC (2)		6
		<hr/> 16

SIXTH QUARTER

	Course Title	Quarter Hours Credit
ENG 203	Creative Writing .....	3
PHI 203	Contemporary Issues .....	3
ELEC (3)		10
		<hr/> 16

CURRICULUM INDLUDES 99 QUARTER HOURS OF GENERAL EDU-  
CATION COURSES AND ELECTIVE COURSES.









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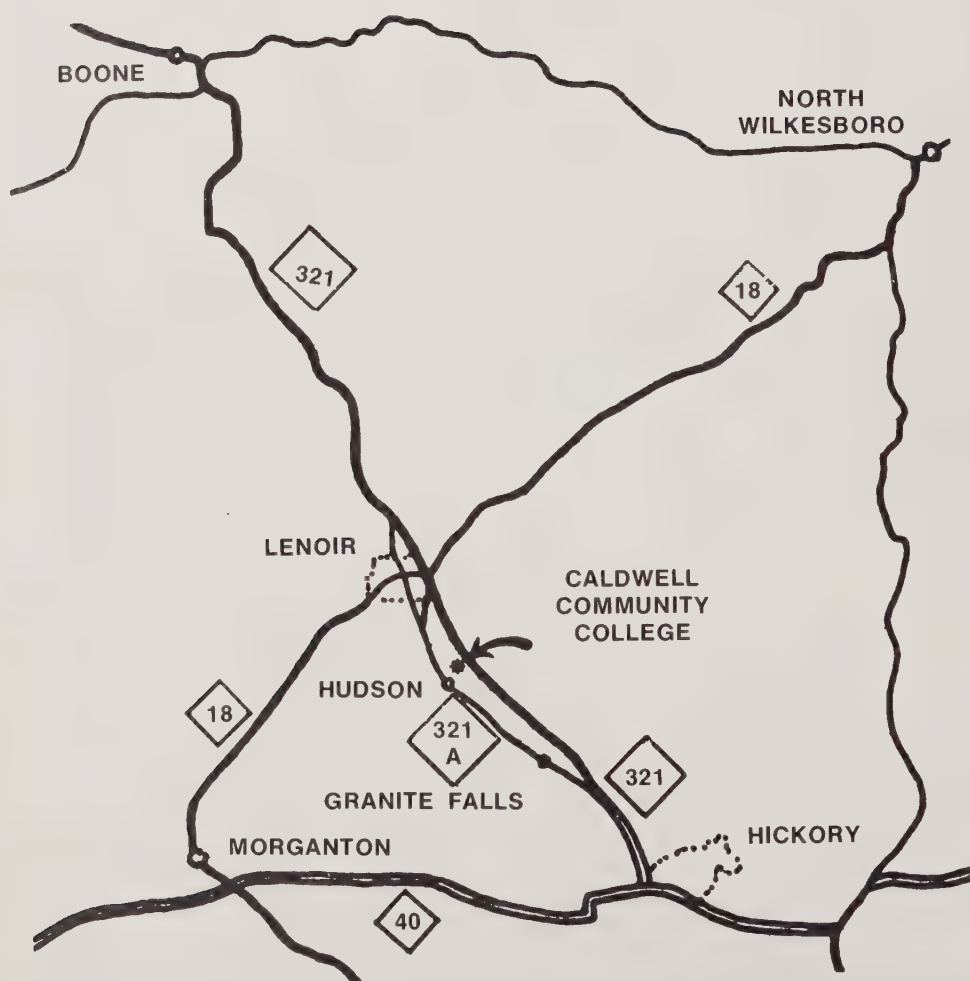
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Community College  
and  
Technical Institute  
1970-72**

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Caldwell Community College is located in Hudson, North Carolina, 6 miles south of Lenoir, and 10 miles north of Hickory, on Highway 321.

GENERAL CATALOG OF

# **Caldwell Community College and Technical Institute**

HUDSON, NORTH CAROLINA

EFFECTIVE SEPTEMBER 1, 1970  
FOR THE 5TH ACADEMIC YEAR

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Box 600  
Lenoir, North Carolina 28645  
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Box 684  
Hudson, North Carolina 28638

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Students having questions not answered in this publication may obtain further information from the Student Personnel Office, Caldwell Community College, Box 600, Lenoir, or Box 684, Hudson, North Carolina.

Telephones:

Lenoir area .....728-4323  
Granite Falls & Hickory .....396-3311

Caldwell Community College and Technical Institute reserves the right to make changes in the regulations, courses, fees, and other matters of policy and procedure as and when deemed necessary.

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# ACADEMIC CALENDAR

## *FALL QUARTER 1970 (55 Days)*

Registration	M-Tu-W	Sept. 7, 8, 9	
Classes Begin	Th	Sept. 10	8:00 A.M.
Fall Quarter Ends	W	Nov. 25	10:00 P.M.
Exams	M-Tu-W	Nov. 23, 24, 25	
Thanksgiving Holidays Begin	W	Nov. 25	10:00 P.M.

## *WINTER QUARTER 1970-1971 (55 Days)*

Registration	Tu-W	Dec. 1, 2	
Classes Begin	Th	Dec. 3	8:00 A.M.
Christmas Holidays Begin	F	Dec. 18	5:00 P.M.
Classes Resume	M	Jan. 4	8:00 A.M.
Winter Quarter Ends	W	Mar. 3	10:00 P.M.
Exams	M-Tu-W	Mar. 1, 2, 3	

## *SPRING QUARTER 1971 (55 Days)*

Registration	Tu-W	Mar. 2, 3	
Classes Begin	M	Mar. 8	8:00 A.M.
Easter Holidays Begin	Th	April 8	10:00 P.M.
Classes Resume	Tu	April 13	8:00 A.M.
Spring Quarter Ends	W	May 26	10:00 P.M.
Exams	M-Tu-W	May 24, 25, 26	

## *SUMMER QUARTER 1971 (53 Days)*

Registration	Th-F	June 3, 4	
Classes Begin	M	June 7	8:00 A.M.
Independence Holidays Begin	F	July 2	5:00 P.M.
Classes Resume	M	July 12	8:00 A.M.
Summer Quarter Ends	W	Aug. 25	10:00 P.M.
Exams	M-Tu-W	Aug. 23, 24, 25	

## *FALL QUARTER, 1971 (55 Days)*

Registration		Sept. 6, 7, 8	
Classes Begin		Sept. 9	8:00 A.M.
Fall Quarter Ends		Nov. 24	10:00 P.M.
Thanksgiving Holidays Begin		Nov. 25	
Exams		Nov. 22, 23, 24	

*WINTER QUARTER, 1971-72 (55 Days)*

Registration	Nov. 29, 30	
Classes Begin	Dec. 1	8:00 A.M.
Christmas Holidays Begin	Dec. 21	10:00 P.M.
Classes Resume	Jan. 3	8:00 A.M.
Winter Quarter Ends	Feb. 25	10:00 P.M.
Exams	Feb. 23, 24, 25	

*SPRING QUARTER, 1972 (54 Days)*

Registration	Mar. 1, 2	
Classes Begin	Mar. 6	8:00 A.M.
Easter Holidays Begin	Mar. 31	5:00 P.M.
Classes Resume	Apr. 10	8:00 A.M.
Spring Quarter Ends	May 26	5:00 P.M.
Exams	May 24, 25, 26	

*SUMMER QUARTER 1972 (53 Days)*

Registration	June 5, 6	
Classes Begin	June 7	8:00 A.M.
July 4th Holidays	June 30	5:00 P.M.
Classes Resume	July 10	8:00 A.M.
Summer Quarter Ends	Aug. 25	5:00 P.M.
Exams	Aug. 23, 24, 25	



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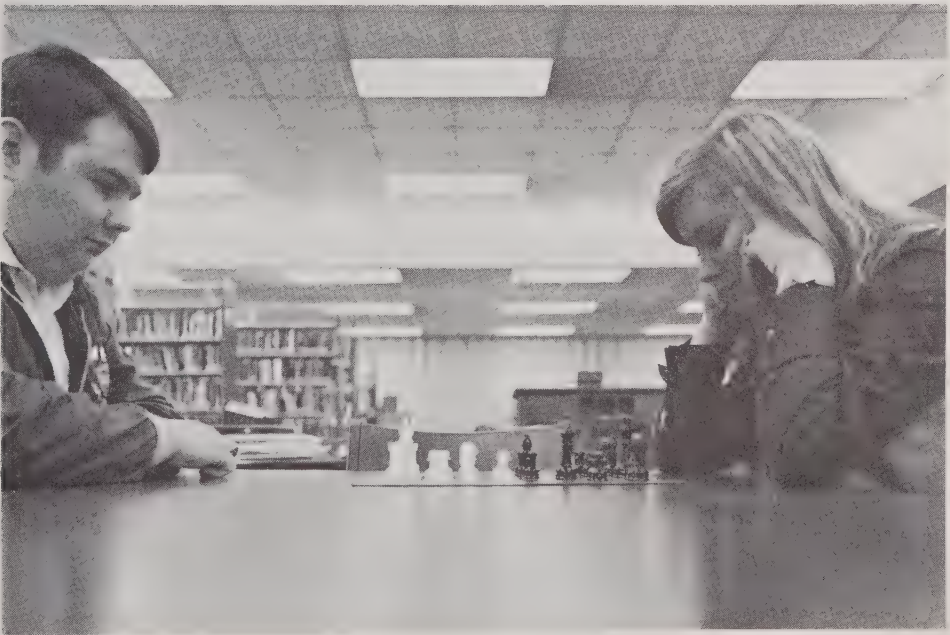
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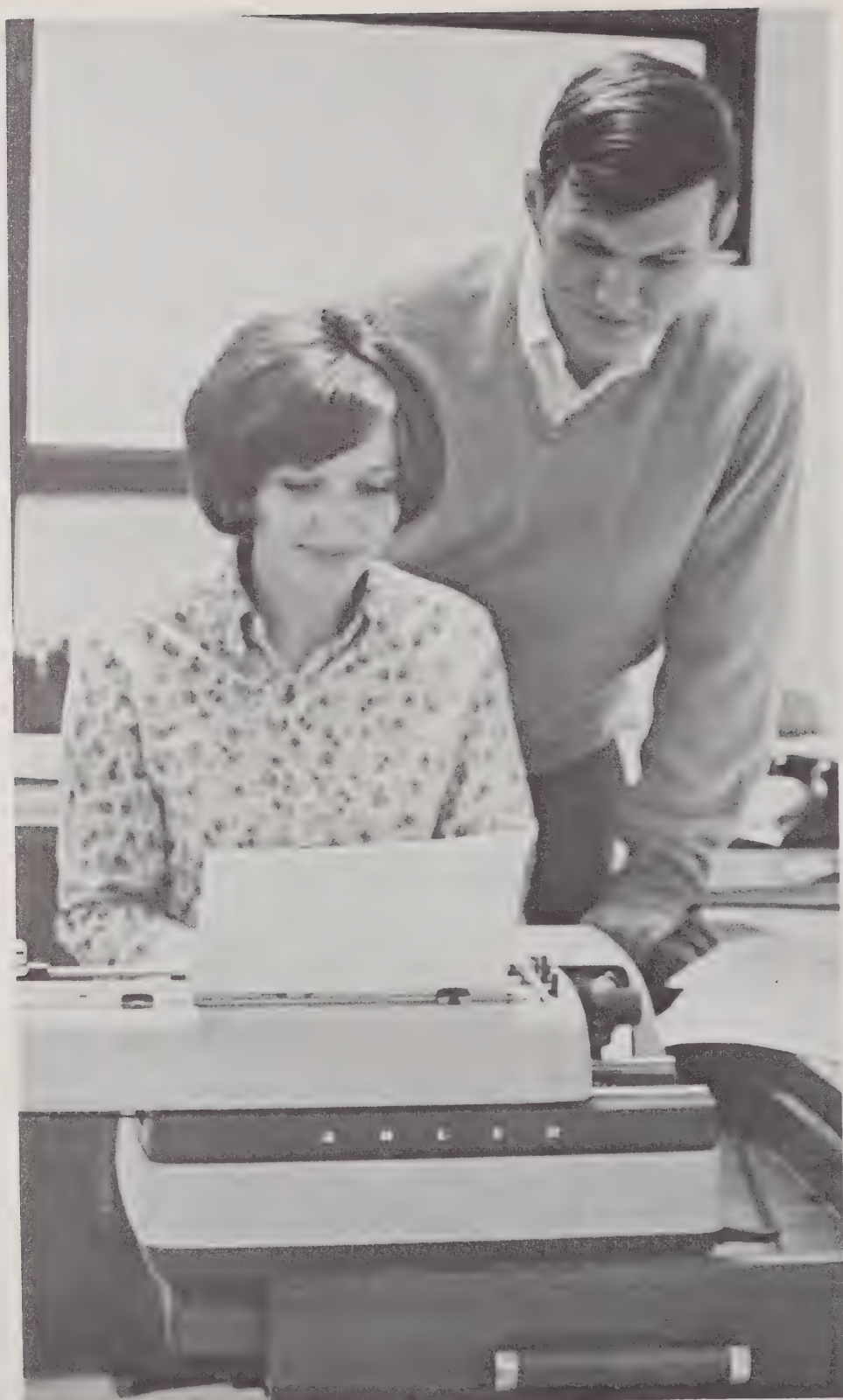
INSTRUCTIONAL STAFF

Almond, Hugh H. ....	Data Processing
B.S., High Point College; M.A., Syracuse University.	
Amos, Joe T. ....	Automotive Mechanics, Welding
Gaston Technical Institute.	
Armfield, George W. ....	Industry Relation Tech.
B.A.; Elon College; M.Ed., University of North Carolina; Additional study, N. C. State University.	
Barnett, Susan C. ....	Psychology
B.A., Winona State College; M.S., Winona State College.	
Beam, H. Edwin .....	Management Tech.
B.S., N. C. State University; M.Ed., N. C. State University; Ed.D., University of North Carolina.	
Bennett, Mark W. ....	Area Consultant—Electric Co-operative
Attended Weaver College. Training	
Bishop, Eliza F. ....	English
B.S., Appalachian State University; M.A., Appalachian State University	
Bishop, Tyrone R. ....	Drafting
B.S., Appalachian State University; M.A., Appalachian State University	
Blevins, Irene T. ....	Practical Nursing
B.S., Montreat College; R. N., Memorial Mission Hospital.	
Bolick, Sarah L. ....	Nursing—In Service Training
R.N., Forsyth Memorial Hospital.	
Campbell, Rosalind C. ....	Library Technology
B.A., Emory Henry College; M.A., Appalachian State University.	
Cantrell, James C. ....	Drafting
B.S., Western Carolina University; Graduate study, Appalachian State University.	
Carpenter, Edwin T. ....	Math-Physics
B.A., Lenoir Rhyne College; M.A., Appalachian State University; additional study, Wake Forest University.	
Carpenter, Thomas Eugene .....	Economics
A.A., Brevard College; B.S., Clemson University; M.A., Appalachian State University, additional study, N. C. State University.	
Crosby, John A. ....	Social Studies
B.S., Wake Forest University; M.A., Appalachian State University.	
Deal, Tony R. ....	Sociology
A.B., Catawba College; M.S., N. C. State University.	
DeLoach, William M. ....	Accounting
B.C.S., University of Georgia; M.B.A., Syracuse University.	

- Eaker, Charles L. ....Biology  
B.S., Applachian State University; M.A.T., University of North Carolina.
- Gwyn, Rufus C. ....Data Processing  
B.A., University of Philadelphia; Additional study, New York University,  
and N. C. State University.
- Hayes, Ingrid C. ....Social Science  
Ph.D., University of Vienna
- Haynes, B. E. ....Machine Shop  
Diploma, Gaston Technical Institute; Additional study, N. C. State Uni-  
versity.
- Hemphill, Jimmy D. ....Recreational Therapy  
B.S., University of North Carolina; M.S., University of North Carolina.
- Hoyle, Esther C. ....Library Technology  
B.A., University of North Carolina at Greensboro; M.A., Appalachian State  
University.
- Keller, Judy S. ....Cosmetology  
Diploma, Hickory Beauty School; additional study, Wake Forest University.
- Kelly, Sue G. ....English  
B.A., Meredith College; M.A.T., University of North Carolina.
- Kincaid, Claudia S. ....English  
A.B., Lenoir Rhyne College; M.A., Appalachian State University.
- Kirby, G. Steward ....Social Science  
A.B., Lenoir Rhyne College; M.A., Appalachian State University; 6th year  
specialist in Educational Administration, U. N. C. - Chapel Hill
- Kiziah, Ronald L. ....Secretarial Science  
B.S., Appalachian State University; M.A., Appalachian State University.
- Lorenzo, Manuel ....Spanish  
B.S., Appalachian State University; M.A., Appalachian State University;  
Additional study, Louisiana State University, University of Madrid, Texas  
Technological College, University of Argentina.
- Marion, Mary L. ....Practical Nursing  
B.S., University of North Carolina at Greensboro; R.N., N. C. Baptist  
Hospital.
- Martin, Johnny S. ....Mathematics-Physics  
B.S., N. C. State University; M.A., Appalachian State University.
- Miller, William H. ....Engineering  
B.S., N. C. State University
- McAfee, Charles O. ....Business Education  
B.S., University of N. C.; M.B.A., Harvard Business School.
- McLean, Claudia M. ....Preparatory Education  
B.S., Appalachian State University; Graduate study, Appalachian State  
University.
- Minton, Lorraine W. ....Secretarial Science  
B.S., Appalachian State University; M.A., Appalachian State University.
- Niblock, M. Lawrence ....Math-Physics  
A.B., Catawba College; M.A., Fisk University.

- Peterkin, Thomas W. . . . .Physical Education  
A.A., Louisburg College; B.S., Atlantic Christian College; M.A.T., University of North Carolina.
- Phipps, Joe . . . . .Welding  
B.S., Appalachian State University; additional study, N. C. State University.
- Scheller, Robert L. . . . .Electrical Installation and Maintenance  
U. S. Navy, Electrical Instructors School.
- Sigmon, Rex G. . . . .Psychology  
B.A., Lenoir Rhyne College; M.A., Appalachian State University; Education Specialist Certificate, University of Texas; Additional study, University of Wyoming.
- Stallings, Dan N. . . . .Building Trades  
A.A., Mars Hill; B.S., Appalachian State University; M.Ed., University of North Carolina; Ed.D., University of North Carolina.
- Styres, Robert N. . . . .Furniture Production  
B.S., N. C. State University.
- Tilson, B. Hugh . . . . .Agricultural Business  
B.S., N. C. State University; Additional study, Columbia University.
- Watson, Myrtle E. . . . .Cosmetology  
Diploma, Hickory Beauty School; Additional study, N. C. State University and Wake Forest University.
- Wyke, D. Samuel . . . . .Social Studies  
B.S., Appalachian State University; M.A., Appalachian State University; Certificate of Advanced Studies—6th Year, Appalachian State University.





# THE COLLEGE

## HISTORY

Several historical events are important in the development of the Caldwell Community College.

The 1963 North Carolina General Assembly passed the Community College Act creating a system of comprehensive community colleges, technical institutes, and industrial education centers in the State under the State Board of Education.

In January, 1964, the Caldwell Community College was tentatively approved by the State Board of Education. On March 28, 1964, the people of Caldwell county approved the college through the bond note of \$600,000 for the purchase of the site and construction of the facilities and up to 5 cents tax authorization for operating the college. Final approval by the State Board of Education followed on April 2, 1964.

The President was selected in October, 1964. The site was selected in January, 1965. Selection of the architect was made in February, 1965. New facilities were occupied in September, 1967.

On July 1, 1970 Caldwell Technical Institute was authorized by the State Board of Education to offer College Parallel courses. Subsequently, Caldwell Technical Institute changed its name to the present Caldwell Community College and Technical Institute.

## PURPOSES AND OBJECTIVES

Caldwell Community College and Technical Institute, serving primarily Caldwell and surrounding counties and operating within the legal framework set by the North Carolina General Assembly, opens its doors to any person seeking an education. Courses are offered in college transfer work, in technical and vocational areas, and in general adult education. The college is committed to providing quality, inexpensive, continuing educational opportunities to meet the needs of young people and adults at facilities located within commuting distance of their homes.

In keeping with the general purposes of Caldwell Community College and Technical Institute, the Board of Trustees, the administrative staff, and the faculty have adopted certain specific objectives. These are to

Provide effective teaching to all who enroll.

Provide educational opportunities for adults who discontinued their formal training before mastering the basic skills of reading, writing, and arithmetic.

Provide curricula that will reflect changing needs of the community and training patterns for employment.

Provide a two-year program of general education for persons who desire college level work.

Provide technical education programs for those persons wishing to enter the more highly skilled occupation in business and industry.

Provide trade education programs for students who are preparing to enter occupations at that level.

Provide general interest courses that meet adult education and community service needs.

Provide cultural opportunities to broaden the general education of the students and of the community at large.

Provide educational guidance to individuals.

## **LOCATION**

The Caldwell Community College is located on a 78-acre tract of land in Hudson, North Carolina. Since the college is on Highway 321, it is accessible to the population centers of Lenoir (5 miles), Granite Falls (5 miles), and Hickory (10 miles).

## **ACCREDITATION**

Caldwell Community College is a comprehensive public community college operating under the North Carolina Department of Community Colleges. The college is approved by the North Carolina State Board of Education. Caldwell Community College is currently accredited as a special purpose institution by the Southern Association of Colleges and Schools.

# ADMISSIONS

## (CURRICULUM CREDIT PROGRAMS)

### HOW TO APPLY FOR ADMISSION

**1. Secure application form and make application for admission.** Application forms may be secured from your local guidance counselor or by writing the Caldwell Community College, Box 600, Lenoir, North Carolina, or by calling telephone number 728-4323 in Lenoir or 396-3311 in Granite Falls. The application for admission should be very carefully and accurately completed and submitted to the college as early as possible to assure a place in the curriculum desired. Enrollment limits are set for all curriculum offerings.

**2. Tuition Deposit (Required)**

All applications submitted for the regular curriculum courses must be accompanied by a \$5.00 non-refundable deposit which will be applied to the tuition of the particular quarter the student is seeking enrollment.

**3. Submit a transcript of high school records and of any post-high school work taken.** Ask the counselor of the high school or the registrar of the college last attended to send a transcript of academic work to the Registrar at Caldwell Community College. This transcript may be submitted at any time during the senior year in high school (if the applicant is still attending high school). An applicant meeting all other requirements will be given provisional acceptance pending receipt of his final grades from high school.

**4. Complete the required testing program for admissions placement.**

Caldwell Community College requires the *Scholastic Aptitude Test* (S.A.T.) for placement in college transfer programs.

The S.A.T. is given five times yearly by the College Entrance Examination Board, and information is available from the college, local guidance counselors, or by writing Box 592, Princeton, New Jersey. During 1970, the College Qualifications Test (C.Q.T.)

will be administered by Caldwell Community College for placement of those who have not had the S.A.T. Students in this situation will be required to take the S.A.T. on the next scheduled test date.

The college requires the School and College Ability Test for all Technical programs. This placement test is given at the college every Tuesday evening at 7 o'clock. The General Aptitude Test Battery or the Otis Intelligence Test and the Mechanical Reasoning Test of the Differential Aptitude Test is required of all vocational students. Applicants for the Data Processing and Practical Nursing programs will be required to take additional subject related tests in English and mathematics.

Information concerning these tests may be obtained from the Student Personnel Office at Caldwell Community College. There is no cost involved in taking the tests.

**5. Arrange for an interview with a member of the Student Personnel Staff or other representative of the Caldwell Community College.** The interview is a requirement for completing the application process. The applicant may arrange for the interview through his guidance counselor, or by calling the Student Personnel Department at 728-4323 in Lenoir or 396-3311 in Granite Falls. The interview may be arranged in the local school or at Caldwell Community College.

## ADMISSION REQUIREMENTS

The Caldwell Community College is a co-educational college open to any individual meeting the admission requirements for the particular course or area in which he wishes to enroll. These requirements vary with the areas of study offered by the college.

### College Transfer Curriculum

Requirements for admission of a candidate to the regular two-year College Transfer Program include the following:

1. Must be a high school graduate or have a state approved equivalent education.
2. Have acceptable scores on the Scholastic Aptitude Test administered by the College Entrance Examination Board.
3. Be in acceptable physical and mental health.
4. Have a personal interview with a designated member of the Student Personnel staff or faculty.

## Technical Curricula

Requirements for admission of a candidate to the regular two-year technology program include the following:

The candidate:

1. Must be a high school graduate or have a state approved equivalent education.
2. Have acceptable scores on the School and College Ability Test administered by Caldwell Community College. (Acceptable scores on the College Board Scholastic Aptitude Test "S.A.T." may be used in lieu of the S.C.A.T.) Students entering Data Processing must also have an acceptable score on the Data Processing test. Students not meeting accepted standards must take developmental study courses to fulfill the necessary requirements.
3. Be in acceptable physical and mental health.
4. Have a personal interview with a designated member of the Student Personnel staff.

## Vocational Curricula

A candidate for admission to the regular trade-vocational training program must meet the following:

1. Must be at least 18 years of age.
2. Must have satisfactorily completed a minimum of eight units of accredited secondary school work or possess maturity, attitudes, aptitudes, and interests necessary for success in the particular curriculum for which he is applying.
3. Make acceptable scores on standard and/or local institutional tests administered by Caldwell Community College.
4. Be in acceptable physical and mental health.
5. Have a personal interview with a designated member of the Student Personnel Staff.

## PROVISIONAL STUDENT

Students whose records are not complete may be permitted to enter the College as a **Provisional Student** on the basis of a personal interview with a member of the Student Personnel Staff. A provisional student will be required to complete the pre-entrance examinations and to submit all required transcripts prior to the final exam period of the particular quarter. In other

words, he is admitted in good standing, provided examination scores, transcripts, and other information prove satisfactory. Should the above requirements not be met prior to the final examination period of the particular quarter in which he enters, grades will be recorded on the permanent record as "Audit" and no credit will be given.

### **INDUSTRY RELATED STUDENT**

All students now working full-time in industry who desire to enroll in courses directly related to their occupation are exempt from certain admissions requirements. Such students need only the written recommendation of their employer, a transcript, and the completed application form. However, before an industry related student can pursue the second year of an Associate in Applied Science degree program, he must have the high school diploma or an equivalency certificate. The exemption applies to the Furniture Technology Curriculum.

### **OTHERS**

Students possessing college degrees who wish to enter either technical or vocational courses will be exempt from the admissions tests. Such students need only their college transcripts and the completed applications.

### **RE-ADMISSIONS POLICY**

A student dismissed from the college for academic reasons can be considered for re-admission by the Admissions Committee after one quarter's absence following dismissal.

### **TRANSFER STUDENTS**

Students may be admitted with advanced standing by transfer from technical institutes, colleges or universities. All applicants for transfer must have maintained a "C" average or better on courses taken at other institutions and must be eligible to return to the last institution attended.

If admitted, the prospective transfer student's record will be evaluated by the Dean of Student Affairs to determine the amount of credit that can be transferred and applied toward the program in which the applicant desires advanced standing.

### **PROFICIENCY EXAMINATIONS**

Advanced placement is offered to those students who, because of their demonstrated abilities, are qualified to accelerate their studies. To obtain advanced placement, the student may take a

proficiency examination in a subject when he believes that he has mastery of the course material. Application for such an examination must originate with the Registrar. Electives *may* be chosen by the student to equal the number of credit hours omitted.

## ADMISSION OF FOREIGN STUDENTS

Caldwell Community College is authorized by the U. S. Department of Naturalization and Immigration to admit foreign students. This permission was granted on July 12, 1966, with authorization number WAS 214-f562.

All applicants from foreign countries are expected to submit necessary academic documents with appropriate test results at least three months prior to the quarter in which they plan to enter.

## VETERANS

Qualified veterans who are admitted for instruction may be approved upon presentation of the Certificate of Eligibility issued by the Veterans Administration. Students will be accepted under Public Law 550 or Public Law 89-358. Veterans under the above mentioned laws are responsible directly to the school upon registration for payment of all costs. Veterans will further be responsible for furnishing the Veterans Counselor with a monthly attendance report. No reimbursement cards can be authorized by the school until such reports are on file.



# GENERAL ACADEMIC REGULATIONS

## Grading System

Official grades are issued for each student at the end of each quarter. Students who lack passing averages at mid-quarter will be notified of this fact and should schedule a conference with the instructor and/or his advisor.

Students enrolled in curriculum program courses will be graded by the **letter-grade** system shown below and assigned a grade point equivalent in quality points for each quarter scheduled.

Numerical Equivalent	Letter Grade	Grade Point Equivalent
93-100	A—Excellent	4 quality points each quarter hour
85- 92	B—Good	3 quality points each quarter hour
77- 84	C—Average	2 quality points each quarter hour
70- 76	D—Below Average	1 quality point each quarter hour
Below 70	F—Unsatisfactory	0 quality points each quarter hour
	I—	Indicates failure to complete certain course requirements because of extenuating circumstances. All incompletes must be removed before the end of the succeeding term or the grade becomes an automatic “F.”
	W—	Student withdrew from the course.
	Y—	Indicates no grade or credit given.
	P—	Proficiency examination credit

## **Courses Repeated for Credit**

When a course is repeated, the last grade is recorded as the final grade for the course, and only the last hours attempted are counted in determining the students grade point average.

## **Auditing**

A student who audits a course, pays the regular registration and tuition fees. Auditors do not take tests, examinations, or receive grades or credit and cannot later change the "Audit" to credit.

## **REMOVAL OF INCOMPLETES**

An "I," meaning incomplete, indicates that a student has done work of a passing grade in a course but has failed to do some portion of the required work because of an emergency. It is the student's responsibility to have this deficiency removed before the end of the first quarter following the time of receiving the grade of "I" (incomplete), or the grade will be changed to "F."

## **SCHEDULE CHANGES**

Change of student schedule after registration has been completed will be made only with permission of the Registrar.

## **ACADEMIC PROBATION**

Students failing to maintain a 2.0 overall grade point equivalent average will be considered on academic probation and may be required to modify his regular course load. A student will be asked to withdraw from a regular curriculum program if his grade point average drops below 1.0.

## **COURSE LOAD**

Students enrolled for 12 or more credit hours are classified as full-time students. Those taking less are classified as part-time. Normal course load will vary from one curriculum to another and should be carefully planned with the Faculty Advisor. A student may enroll for maximum load depending upon his capability as determined by his Faculty Advisor. A normal course load is outlined by departments in this catalog.

## **APPLICATION FOR DEGREE OR DIPLOMA**

Students are required to apply as candidates for the diploma or the degree. This must be completed during the first two weeks

of the last quarter of school attendance. This insures that the candidate's record will be properly reviewed and that he will be notified of any deficiencies.

### **Requirements for Graduation**

A student is eligible for graduation when he has fulfilled the following requirements:

1. Has satisfactorily completed all the requirements of the curriculum in which he is enrolled.
2. Has sufficient quality points for an overall average of 2.0
3. Has taken care of all financial obligations to the Caldwell Community College.

### **Honors**

A graduating student who has earned an overall quality point average of 3.0 or better during his work at the Caldwell Community College will receive his diploma or degree "With Honors."

### **RESTRICTIONS ON CLASS ADMISSIONS**

No person may attend classes unless the registration procedure has been completed.

### **STUDENT DEFERMENT**

The Selective Service makes provisions for those students who meet certain requirements to be deferred. The first requirement is enrollment in a full time curriculum program (minimum 12 credit hours), and the second one is satisfactory progress in the program.

### **RESIDENCY REQUIREMENTS FOR GRADUATION**

Candidates for a diploma or degree from Caldwell Community College are expected to complete the last 25% of their course work at the College.

### **Attendance Policy**

Students are expected to attend every meeting of every course in which they are enrolled. As all students are adults, some with many responsibilities, an occasional absence from class might be absolutely necessary; however, such absences in no way lessen the student's responsibility for meeting the requirements of the class.

In case of prolonged illness, a student should present a doctor's certificate for any absences beyond the third day (or from the beginning if a teacher requests it) if he wishes such absences to be excused.

According to college regulations, "A student must be dropped from the roll not later than the fifth consecutive unexcused absence, or earlier if notified by the proper college official."

## **SUSPENSION AND DISMISSAL**

Students will be expected to conduct themselves at all times as individuals of prudence and maturity. The rights and feelings of others will be respected. Students shall demonstrate a high regard for school facilities and property and for the personal property of others.

School regulations which serve to control such activities as vehicular traffic and parking, smoking, and other aspects of personal conduct must be observed. Students may be suspended or dismissed for conduct which is considered incompatible with standards of propriety and good judgment.

Re-admittance of dismissed students at a subsequent session will be at the discretion of the College Executive Council.

## **TRANSCRIPTS OF CREDIT**

Transcripts of credit will be supplied to all students and former students requesting them, subject to certain conditions. Individuals must have made satisfactory financial arrangements to care for all amounts due the College.

## **WITHDRAWING FROM SCHOOL**

Students who withdraw from the College during any quarter must first consult with the Student Personnel Office. This protects the student's scholastic record, his right to re-enroll, and his right to transfer to another Community College.

A student may withdraw from any course prior to the end of the 8th week and receive a W. with no bearing on his G.P.A. There is no limit to the number of times a student may withdraw from a particular course.

## **Student Contact Hours**

The contact hours shown in the catalog are minimal. It is a policy of this institution to permit students to enroll in additional subjects and laboratory work beyond those shown in the catalog in order to broaden their training.

## CATALOG REQUIREMENTS

Candidates for the diploma or degree must meet the requirements as outlined in the catalog for the year of their first enrollment or for any subsequent bulletin under which work is taken, but in all cases must complete work for their diploma or degree within 10 years from the date of the catalog selected.



# STUDENT EXPENSES

## STATEMENT OF POLICIES REGARDING STUDENT EXPENSES

Tuition and fees for each quarter are payable on or before the date of registration.

All checks and money orders should be made payable to Caldwell Community College. A check given in payment of expenses which is returned by the bank creates an indebtedness to the College and jeopardizes the student's enrollment.

Any student who is unable to make payment at the time of registration must make special arrangements with the Business Manager to pay outstanding balance of tuition and fees within the first week of classes. If a longer extension of time is needed a student must assure payment of any outstanding balance of tuition and fees.

### TUITION

Caldwell Community College offers educational opportunity at minimum cost to the student. Tuition fees are set by the State Board of Education and are subject to change without notice. Cost of textbooks and supplies are additional expenses which vary according to the program of study. Current basic fees to be paid by students upon enrollment are as follows:

#### *College Transfer Program*

Tuition fee of \$3.00 per credit hour with a maximum tuition charge of \$42 per quarter.

#### *Technical and Vocational Programs*

Tuition fee of \$2.50 per credit hour with a maximum tuition charge of \$32 per quarter.

### *General Adult Education Programs*

No tuition fees charged. A charge for supplies is made when necessary.

## **ADVANCED TUITION DEPOSIT**

### **For New Students**

A \$5.00 advanced tuition deposit is required with all applications for full-time attendance. This amount will be deducted from the student's first quarter tuition charge, leaving the balance due. **The tuition deposit is not refundable.**

## **ACTIVITY FEE**

### **(Full and Part-time Students)**

All curriculum students taking three or more courses will pay a student activity fee of \$3 per quarter at the time of registration. Part-time students taking two courses will pay \$2; students taking 1 course will pay \$1. No activity fee will be collected for extension courses. These fees are used to finance student body activities such as: school newspaper, school annual, dances, picnics, sports supplies and equipment, special events, etc. **This fee is not refundable.**

## **INSURANCE**

Accident insurance, covering hours in school and transportation to and from school, is available for \$3.00 per year. Students desiring this insurance may make payment to the bookkeeper while registering for the Fall Quarter and at other designated times. **It is not refundable.**

Neither the College nor the State of North Carolina carries insurance to cover any student for accidents or otherwise. Therefore, students enrolled in all shops and labs are particularly urged to take advantage of this insurance.

### **Books and Supplies**

A student is required to buy the necessary textbooks and supplies prescribed in the curriculum area he is entering. These vary according to different courses taken by the student. An average expenditure of \$40.00 can be expected by the new Fall Quarter student for books. The bookstore handles second-hand books for students wishing to cut their book expense. Normal school supplies are sold during regular bookstore hours.

## **FEES FOR SPECIAL PURPOSES**

Special activity and equipment usage fees are charged for some curriculum courses. Physical Education, Art, Music, Physics, and Science are examples of courses that may or may not have special purpose fees. Special fees will be indicated on the general course schedule.

Graduation expenses for diploma, cap and gown are payable at the beginning of the quarter in which the student expects to graduate. These costs are presently set at approximately \$10.00.

Cosmetology students are required to purchase their uniforms. These costs vary among different students.

The school yearbook is provided to students each spring quarter with cost assessed as follows:

A \$3.00 initial yearbook payment when ordering the yearbook and then:

Students paying \$9 activity fees — No extra charge

Students paying \$8 activity fees — \$1 extra charge

Students paying \$7 activity fees — \$2 extra charge

## **LATE REGISTRATION FEE**

Students that have attended Caldwell Community College the quarter prior to any registration period will be assessed a \$1.00 per course late registration fee when registering at periods other than those specified in the school calendar.

## **REFUNDS FOR FULL-TIME STUDENTS**

Tuition refunds for full-time students are made only when a student withdraws from the College for unavoidable reasons. In such cases, \$20.00 may be refunded to Technical and Vocational students if withdrawal is completed within 10 calendar days from the first day of classes in the particular quarter. College transfer students will be refunded a maximum of \$28.00.

## **REFUNDS FOR PART-TIME STUDENTS**

Refunds for part-time students are made only when a student withdraws from the College for unavoidable reasons. In such cases, two-thirds of the student's tuition may be refunded if withdrawal is completed within 10 calendar days from the first day of classes in the particular quarter. Refunds for tuition of \$5 or less will not be considered unless a course fails to materialize.

# FINANCIAL AID FOR STUDENTS

## GENERAL INFORMATION

Caldwell Community College encourages prospective students who desire to enroll but face difficult financial problems to consult with the Student Aid Committee through the Dean of Student Affairs.

This committee is concerned not only with the awarding of scholarships but also with awarding work study grants and loans. Within the limited funds available for these purposes, every effort is made by the College to help students who need monetary assistance.

## APPLICATION PROCEDURE

Students who are entering Caldwell Community College for the first time and are in need of scholarship aid are requested to follow this pattern of cooperation:

1. After application for admission has been initiated (see Admissions), write to the Dean of Student Affairs and outline need for financial aid. Instructions and the aid application, SP form 11, will be sent to the applicant. It is to the advantage of the student to apply as early as possible for financial assistance.
2. The applicant should complete the student aid application as soon as possible and return it to the Dean of Student Affairs. All items on the application **must** be complete for the committee to consider the application.
3. Report for a personal interview when designated.

4. Determination of the scholarship, loan, or work-study grant will be made by the Institute's Student Aid Committee and applicants will then be notified by letter from the Dean of Student Affairs.

## **SCHOLARSHIPS**

Scholarships available as of the printing of this publication are:

### **Claude F. Seila Scholarship**

Awarded each year to one student taking a full time curriculum. This scholarship, given by the Lenoir Woman's Club, will award \$175.00 to the recipient.

### **Anna Hasburg Mills**

#### **Memorial Nursing Scholarship**

Awarded each year to one student taking the Practical Nursing curriculum. This is a full scholarship covering all tuition, fees, and textbooks in the program. This \$1,000.00 memorial scholarship fund was given by Mrs. Grace Mills Love.

### **Lenoir Kiwanis Club Sponsorship**

Awards granted to students in the form of tuition grants, according to need and on a quarterly basis. This \$300.00 scholarship fund was established by the Lenoir Kiwanis Club on December 27, 1966.

### **Half Century Home Demonstration Club Scholarship**

A \$150.00 scholarship to be awarded to any deserving student.

### **Alpha Delta Kappa Sorority Scholarship**

This tuition scholarship was presented to the College on December 12, 1967, to be awarded to deserving students.

### **The Arthur Alfred Rauchfuss, Sr. Memorial Fund**

A memorial scholarship fund established by the family, to be awarded to deserving students.

### **Lenoir Woman's Club Scholarship Fund**

Awards given to students in the form of tuition, fees and textbook expense, according to need and on a quarterly basis. This scholarship fund was established by the Lenoir Woman's Club in 1966 and is to be awarded to deserving students.

### **Dr. Caroline M. McNairy Scholarship Fund**

A memorial scholarship fund established in 1969 to be awarded to deserving practical nursing students.

### **Lenoir Business and Professional Women's Club Scholarship Fund**

A \$100.00 scholarship fund to be awarded to any deserving student.

### **River Valley Garden Club Scholarship Fund**

A \$105.00 general scholarship fund to be awarded to any deserving student.

### **Special Scholarship Fund**

Awards granted to students in the form of tuition, fees, and textbook grants on a quarterly basis. This \$1000.00 Special Scholarship Fund was established by 10 area progressive businessmen in 1968 and is to be awarded to deserving students.

## **NATIONAL DEFENSE STUDENT LOANS**

Caldwell Community College participates in the National Defense Student Loan Program. Through this program, low-interest, long-term loans are made to full-time students. The maximum amount that a student can receive under this program is \$1000.00 per year.

## **COLLEGE SCHOLARSHIP SERVICE**

Caldwell Community College serves students directly as a disbursing agency for the College Scholarship Service which makes loans to students in varying amounts with low interest and long-repayment periods. This is a non-profit organization located in Raleigh, N. C. Applications for these loans are available from the Dean of Student Affairs.

## **EDUCATIONAL OPPORTUNITY GRANTS**

This program of direct grants of financial aid is available to students from low-income families who would not be able to attend Caldwell Community College without such help. Grants are made to cover all expenses necessary for the student to continue at Caldwell Community College.

## **COLLEGE WORK-STUDY PROGRAM**

Caldwell Community College participates in the College Work-Study Program which provides on campus work opportunity for students needing financial assistance to attend school. Work is available for students to assist in the library, faculty and administrative offices, bookstore, laboratories, shops, and building maintenance. Students working under this program are paid in cash monthly for the work performed.

## **OTHER AGENCIES AND RESOURCES**

Caldwell Community College serves as a referral and information agency for the following resources:

- A. Veterans Benefits
- B. Social Security Agency
- C. Department of Public Welfare
- D. Various North Carolina Agencies

## **VETERANS EDUCATION BENEFITS**

Caldwell Community College is approved by the Veterans Administration for students who are eligible under the law. Eligible persons for benefits are urged to take advantage of the guidance service and educational facilities of the College. Veterans and dependents or students who expect to enroll under the War Orphans Educational Assistance Act should contact their Veterans Service Office in advance of registration.



# STUDENT SERVICES

## GENERAL PHILOSOPHY

Caldwell Community College clearly recognizes the importance of self-understanding and personal growth in each student as well as his intellectual and social development. The College's program of counseling and guidance has been developed within the context of this philosophy.

Student services deal with various types of student assistance, including admissions, counseling, guidance, orientation, curriculum placement, supervision and assistance in planning extra-curricular activities, part-time employment, financial aid, student government, graduate placement, school publications, and referral sources.

Guidance, broadly conceived, is reflected through faculty-student relationships, through organized counseling services and through extracurricular activities.

## COUNSELING AND TESTING SERVICE

### Counseling

Opportunity for counseling services is made available to every student enrolled in Caldwell Community College. Counseling services are available for the discussion of personal problems affecting the satisfactory progress of the student in his chosen curriculum, for the discussion of his educational progress and for the discussion of work or study habits.

Each student is also assigned a faculty advisor to whom he may go for help. The full-time evening counselor serves as advisor for evening students.

## **Testing Service**

Testing is provided at no cost to the students at CCC. There is a charge for the Scholastic Aptitude Test (S.A.T.) which is charged by the College Entrance Examination Board. In addition to admissions tests, the testing program has tests available to measure aptitude, temperament, achievement, and vocational interest. Individuals are encouraged to avail themselves to these services.

## **Community Counseling Service**

Individuals of the community are invited to participate and use the counseling and guidance services available at Caldwell Community College. Those individuals who feel they need assistance in the attainment of personal goals are invited to use this service. There is no charge for these services.

## **Faculty Advisor System**

This program is a cooperative effort of the faculty and Student Services Office. At the time of enrollment, each student is assigned a faculty advisor. The main purpose of the advisor is to assist students in planning their programs and selecting courses so that appropriate progress will be realized. Each student is expected to be fully aware of his status in his program in relation to standards of the College.

## **Extracurricular Activities**

Student participation in extracurricular activities is encouraged by the College. Each student organization is required to have a faculty advisor. The Student Government regulates all extracurricular activities.

## **Alumni Association**

Preliminary plans have been made to establish an active alumni association at Caldwell Community College. The first organizational meeting was held on June 5, 1969.

## **Student and Alumni Placement**

The Placement Service is handled by the Student Services Counselor and is designed to assist all students in their search for either temporary or career job opportunities. This service seeks to develop and maintain relationships with local and national employers who are looking for qualified applicants, and schedules recruiting interviews on and off campus throughout

the year. Students and alumni are encouraged to register and confer with this office as frequently as they desire whether or not they have immediate need for job placement services. There are no fees for this service.

### **Student Tutorial Program**

Special assistance is available for students in all areas of study at the college. Tutors will be assigned to students needing assistance. There is no charge for this program. Students should contact their faculty advisor.

### **Student's Responsibility for Securing Special Help**

It is the student's responsibility to seek out extra help if needed. Instructors are available for conferences at regular scheduled office hours but will not require that a person come in for extra help. In all cases, an instructor will be more than willing to help, but it is up to the individual to ask for help.

### **Social Life**

The Student Lounge is the social and recreational rallying point of "Caldwell students" for relaxation. Students and faculty meet informally to drink coffee between classes, especially at free periods, for refreshments and snacks or simply to chat with friends.

Students are allowed special rates at local bowling lanes, movies, swimming pools, community centers, etc. These activities are in addition to the regularly scheduled extracurricular activities of the College.

### **Honors**

Each year many students receive various honors awarded by the faculty and student body of Caldwell Community College. Listed among the more important of these are students selected for Who's Who In American Junior Colleges, the quarterly President's List, graduation "With Honors," Miss C.C.C., Christmas Queen, Editor of the yearbook, Editor of the newspaper, Officers of the Student Government and various clubs, special faculty "Honors" certificates to outstanding students, plus others.

# DEVELOPMENTAL STUDIES PROGRAM

The Developmental Studies Program is designed for the student whose level of achievement at the time of admission to the college indicates a low probability of success in curriculum courses. A student is selected for this program if his high school record, entrance test scores, and information gained by interview would indicate the likelihood of difficulty with the curriculum for which he has applied. The Developmental Studies Program consist of conventional classroom instruction and individualized study in the Advancement Laboratory.

## COURSES PLANNED FOR DEVELOPMENTAL STUDIES PROGRAM

ENG 091	GRAMMAR AND COMPOSITION I	2-2-0 (3)*
ENG 092	GRAMMAR AND COMPOSITION II	2-2-0 (3)*
ENG 093	GRAMMAR AND COMPOSITION III	2-2-0 (3)*
ENG 094	GRAMMAR AND COMPOSITION IV	2-2-0 (3)*
MAT 090	DEVELOPMENTAL MATHEMATICS I	2-3-0 (4)*
MAT 091	DEVELOPMENTAL MATHEMATICS II	2-3-0 (4)*
MAT 092	DEVELOPMENTAL MATHEMATICS III	2-3-0 (4)*

\* Institutional Credit Only.

# LIBRARY

The purpose of library service at Caldwell Community College is to extend and support the established objectives of the total educational program by making available a variety of materials which fulfill the library needs of the student body and faculty.

The collection consists of approximately 12,000 books, 187 periodicals, 9 newspapers, recordings, microfilms, filmstrips, and tapes, and the equipment necessary for their use.

The staff provides orientation on how to find and use books and other materials in the learning resource center. Students are invited to use the facilities for relaxation as well as for study and to ask for help when they feel the need for it.



# GENERAL ADULT AND COMMUNITY SERVICE PROGRAMS

The Caldwell Community College provides training in numerous subjects through its General Adult programs. Adult classes are held both at the college and at various locations throughout Caldwell, Watauga and Avery Counties. These classes are designed to prepare individuals for employment or to upgrade workers already employed.

The Continuing Education department also serves area industries and public agencies by providing training for their employees. Training under this division of the college can be offered at any time a need for such training is established. Full details can be obtained by contacting the Dean of Continuing Education at the college.

## **Admission Requirements**

Generally speaking any individual who is 18 years of age or whose high school class has graduated is eligible for admission to General Adult classes; applicants are usually admitted on the first come, first served basis. Some classes may have specific admission requirements, in such cases the Dean of Continuing Education will inform applicants of these requirements.

## **Expenses**

Many of the extension classes are offered without charge to the students; in other cases a small fee is charged to cover the cost of instructional supplies. Any charges should be paid at the first class session.

## **ADULT BASIC EDUCATION**

Adult Basic Education is provided for men and women eighteen years of age and older not currently enrolled in a public school. Its purpose is to improve the economic and social standing of adults in the community. Persons enrolled may be learning to read and write, or they may review English, math, social studies, or science; however, the main objective of this program is to raise adults to the educational level required for attending the adult high school classes.

There are no charges for these courses. The books are furnished by Caldwell Community College.

The courses are 11 weeks in duration. Classes are scheduled to meet two nights a week with most of the classes meeting three hours each night. A student may stay in Group 1 (grades 1-4) or in Group 11 (grades 5-8) as long as he or the instructor deems it necessary. Progression is mainly individual although they are in groups. These classes are held in Caldwell, Watauga and Avery counties on a continuing basis and interested persons should contact the Adult Education Director at Caldwell Community College or any education official in the public schools.

## **ADULT HIGH SCHOOL DIPLOMA PROGRAM**

The Adult High School Diploma program is not designed to compete with regular High School programs, but its primary purpose is to give mature adults who have less than a 12th grade education another opportunity to earn the High School Diploma. Students enrolled in public secondary schools are not eligible to enroll in the Adult High School program. Since Adult High School classes do not operate on a unit system, the adult student is not required to submit a transcript of High School records. However all adults regardless of the number of High School units previously earned, who enroll in the program must demonstrate proficiency in English, Math, Social Studies, and Science at the 12th grade level before they are recommended for the Adult High School Diploma.

Adult High School classes are offered in the evening program at Caldwell Community College and at other locations in Caldwell, Watauga, and Avery counties. These classes usually meet two nights weekly from 6-10 P.M. New classes begin in September, January, March and June.

When students make satisfactory scores on the four subject area tests, they are recommended to the Board of Education in Caldwell, Watauga or Avery Counties to receive the Adult High School Diploma. Graduation Ceremonies will be held several times each year for the Adult Diploma.

# CONTINUING EDUCATION COURSES

## DISTRIBUTING AND MARKETING

### 1601 - E27 REAL ESTATE

Fundamentals of appraisal methods; nature and purpose of evaluation; neighborhood analysis; city growth, depreciation, income approach; types of appraisals essentials of reports.

### 1602 - E29 CASHIER CHECKER TRAINING

For supermarkets, drug, variety and department stores. An intensive program covering cash register operation, scale work, and customer relations.

### 1603 - E26 RETAILING

A practical course emphasizing the principles of merchandising, salesmanship, and record keeping. Modern business practices will be stressed.

## OCCUPATIONAL HOME ECONOMICS

### 1800 - E43 FOOD PREPARATIONS

A class designed to assist ordinary cooks give their meals a gourmet touch by means of subtle flavorings, herbs, spices, and artful methods of preparation.

### 1801 - E43 MEATS

Selection, methods of cooking and serving.

### 1802 - E45 HOME DECORATING

A basic study in color, form design and styling as each applied to the decor of the home.

### 1803 - E40 BABY CARE

Geared to giving expectant mothers and fathers confidence in themselves as parents of new-borns. Includes techniques for bathing and general care of babies, formulas, discussion of growth from conception through the first year after birth.

## OCCUPATIONAL OFFICE

### 1900 - E54 ABC SHORTHAND

This is a very simple system designed to enable a person to take dictation up to 80 words per minute by the end of the course. It is particularly useful to college students and others who would like to take complete notes during lectures.

### 1901 - E50 BOOKKEEPING

Fundamentals of double-entry record keeping as applied to modern business. Systematic recording of business transactions, use of journals, records, statements to illustrate a bookkeeping cycle are parts of the course.

### 1902 - E52 OFFSET DUPLICATION SKILLS

Emphasis on making plates and setting up and how to operate offset press.

**1903 - E59 HOW TO CONDUCT A MEETING**

Parliamentary Law. The rules and procedures for members and officers.

**1904 - E59 BUSINESS LAW**

A non-technical presentation of basic principles as it affects the average citizen engaged in business, or in the every-day business of life.

**1905 - E59 INTRODUCTION TO FINANCIAL PLANNING**

Construction plans, insurance operations, savings plans, securities, market and intelligent investing. Not a course in family budgeting problems.

**1906 - E59 INVESTMENTS IN STOCKS AND BONDS**

Trends, indexes and the mechanics of buying and selling.

**1907 - E51 INTRODUCTION TO DATA PROCESSING**

Surveys of IBM machines.

**1908 - E51 BASIC COMPUTER SYSTEMS**

A review of modern computers, their characteristics, functions and potential.

**1909 - E59 BUSINESS LETTERS AND EFFECTIVE ENGLISH**

For businessmen and women. A positive approach to learning grammar, spelling, vocabulary, paragraph and composition.

**1910 - E59 CONFERENCE LEADERSHIP**

Develop understanding of the conference method, its purpose and use; understanding of effective techniques and good habits and attitudes.

**1911 - E60 SALES TRAINING**

Incorporating all important elements of good salesmanship in a short practical course. Retail and direct selling.

## **TECHNICAL**

**2000 - E69 AVIATION**

This course is a good school for pilot training in aircraft, power plants, safety, radio, navigation, traffic control, weather and the amended Federal Aviation Regulations. Students will cover materials to assist them in passing the Federal Aviation Exam.

**2001 - E63 ELECTRICAL CONTROLS**

A study of modern methods of controlling machinery by electronic circuitry. Machinery controls and electronic mechanism that automatically operate machines will be studied.

**2002 - E63 SMALL ELECTRICAL APPLIANCE REPAIR**

This course will include servicing fundamentals of steam and dry irons, toasters, percolators, and similar small appliances. Circuits will be presented in a simplified manner and an understanding of open circuit, short circuit, low resistance, high resistance, normal operation, and abnormal operation will be emphasized. Methods of testing and their interpretation (analysis) will be included in this course. Students will be involved in performing actual servicing jobs during laboratory sessions.

## **TRADES AND INDUSTRY**

**2100 - E79 EFFECTIVE MANAGEMENT**

This course is designed to help owners, managers, departmental supervisors to see that effective management not only involves human relations, but a manager's responsibility for profits so that the business might maintain benefits for all employees.

#### 2101 - E79 EFFECTIVE SPEAKING

Preparation and delivery of speeches of all occasions. Various speech forms . . . platform, group discussion, conference leading . . . informal talks. Individuals voice recordings and speech analysis. Learn poise and confidence through actual participation in "live" situations.

#### 2102 - E89 UPHOLSTERY

This class will cover springs, covering and other skills in upholstering. The class will be limited to 12 students since it will be held in limited facilities.

#### 2103 - E71 AUTO MECHANICS

This is designed to provide you with enough knowledge to enable you to make minor adjustments or to convey meaningful information to the service man if your car stalls on the road. It will also provide information for prevention maintenance.

#### 2104 - E75 BRICK MASONRY

Learning the fundamentals designed for persons interested in learning the art and skill of bricklaying.

#### 2105 - E86 SMALL GASOLINE ENGINE REPAIR

This course is designed to help individuals gain skills and knowledge needed to do day-to-day service on small two and four cycle air cooled engines.

#### 2106 - E71 AUTO BODY REPAIR

This course is designed to help individuals learn basic skills needed to refinish damaged automobiles.

#### 2107 - E89 KILN DRYING

This course will cover methods for proper air drying of lumber, yard layout, stacking and handling. Commercial lumber kilns and their designs features proper schedules, modification and checking for uniformity in drying of lumber.

#### 2108 - E88 WOODWORKING

This course is designed to help individuals learn how to use various hand and power tools as a hobby. It will be conducted in an industrial arts shop and students will have the opportunity to learn by making something for themselves out of wood and plastics.

#### 2109 - E89 ANTIQUE FINISHING

Scratch, marred and nondescript furniture can be redone by antiquing and made to blend with other furniture.

#### 2110 - E78 DRAFTING/BLEUPRINT READING

Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes.

#### 2111 - E79 SUPERVISORY DEVELOPMENT TRAINING COURSES

A series of courses designed to help individuals develop maximum awareness of the supervisors responsible to his company, his employees and himself. Twenty-Two courses are included in this series for beginning supervision through management level.

#### 2112 - E89 RADIO - TELEVISION SPEECH

Training in announcing, microphone techniques and broadcasting experience utilizing radio stations in the area.

#### 2113 - E88 FURNITURE REFINISHING

Processes, techniques, and methods. Bring wooden chair, table, or chest. Limit: 15 students.

**2114 - E89 UPHOLSTERY FOR HOMEMAKERS**

Demonstration first night. Limit: 15 students.

**2115 - E79 HOW TO GET A JOB AND KEEP IT**

The proper method to use in applying for a job; how to write a resume; interview suggestions.

**2116 - E89 POWER SEWING**

This course will prepare you for advanced apprenticeship, or retraining on industrial sewing machines as used in the needle trades. Single needle, double needle, feed-off-the-arm, covering stitch, Merrow, blind stitch, zig-zag operation, button sewing, buttonhole making, and looping are taught.

**2117 - E89 SEWING MACHINE REPAIR**

Instructions to the basic repair of sewing machines used in the furniture industry will be presented.

**OTHER GENERAL ADULT**

**2500 - A15 INCOME TAX**

This course is designed specifically to teach laymen the most economical method for filing income tax returns, both state and federal. It covers recent changes in the federal law, allowable deductions and general tax information of interest to the average taxpayer. Actual experience in filling out tax forms and working out tax problems will be included.

**2501 - A06 PHONICS (SYSTEM FOR SUCCESS)**

This program provides beginning instruction in reading, writing, and arithmetic. Classes will be organized wherever there are ten adults who want to learn to read, write, and figure better.

**2502 - A12 GREAT DECISIONS**

A unique, nonpartisan discussion program sponsored nationally by the Foreign Policy Association, will focus public debate on the pros and cons of eight important foreign policy issues facing the U. S.

**2503 - A33 PHYSICAL FITNESS**

This class meets once weekly for one hour of physical fitness training during \_\_\_\_\_ quarter.

**2504 - A33 FIRST AID**

This course will be taught by an American Red Cross approved instructor and is open to anyone interested in learning how to care for the injured. Among the topics covered are: bandage application, use of tourniquets, and temporary splints, care of eye and burn injuries, safe usage and storage of medicines, and artificial respiration.

**2505 - A06 NEW MATH FOR PARENTS**

An introduction to the basic principles and concepts of the "new" math being taught in area elementary schools.

**2506 - A45 LEARNING LAB**

The Learning Lab will offer an educational opportunity to anyone. If you dropped out of school at any grade and would like to continue your education, you may. Even if you have been out of school for a long time and have forgotten most of what you learned, you will be welcome. You will be tested to find out where you should begin and will be given easy review materials so that you can catch up where you quit.

**2507 - A18 CERAMICS**

For those interested in working with clay to learn a variety of techniques by making both useful and beautiful things in class.

#### 2508 - A18 COOPER TOOLING

This course deals with simple projects in making into useful and decorative pieces for the home. Individuals will find that they can use and make many articles for their own use and also can supplement their income by selling coppercrafts.

#### 2509 - A18 GEMOLOGY

This class will consist of the following: The history of gem stones, gem locations and current prices; the most modern methods of gem identification for faceted stone; gemological terms; lapidary work will be discussed concerning the proper angles and methods of faceting a round brilliant stone.

#### 2510 - A18 COPPER ENAMELING

Copper forms are cleaned then coated with an adhesive. Powered glass is applied in a variety of ways and designs. Pieces are fired in kiln several times to achieve desired results. Used for bowls, trays, panels on compact boxes, etc., all types of jewelry.

#### 2511 - A18 DECOUPAGE

Wooden wall hangings, boxes of various sizes decorated with various designs. Items coated with special varnish and antiquing materials to give an old and expensive look.

#### 2512 - A18 KNITTING

Knowledge of stitches and procedures in hand knitting also, abbreviations, symbols, terms and type of yarn used in knitting.

#### 2513 - A36 FLOWER ARRANGING

Fundamentals and mechanics of floral arrangements for everyday living.

#### 2514 - A18 BEGINNER'S ART

A freehand, black and white drawing in a study of shapes, shades, and shadows with perspective overlapping forms in charcoal.

#### 2515 - A18 CREATIVE ARTS FOR HOME

Home accessories design, using clay, paper mache, paint, fabric, wood and inexpensive or antique objects to create decorative art.

#### 2516 - A18 INTERMEDIATE ART

Various media, including oil, water color, charcoal and chalk will be covered. Sketching special work in design and painting techniques at various levels of achievement will be taught.

#### 2517 - A36 CAKE DECORATING

Introduction will be given for the beginner in decorating cupcakes and one and two layer special occasion cakes, and will be no cost for the instruction, but each student will be expected to purchase the Basic Cake Decorating Kit at a cost of approximately \$9.00. Enrollment will be limited to 15 students on a first come basis.

#### 2518 - A09 PERSONAL TYPING

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

#### 2519 - A09 PERSONAL TYPING—ADVANCED

This is a continuation of personal typing offered fall quarter. Individuals should know home keys and be familiar with typewriter before enrolling in this course. Time will be given to practice on form and speed.

#### 2520 - A18 BEGINNING PHOTOGRAPHY

Designed to teach students to master the photographic process: camera, film, chemicals, laboratory techniques, composition, print and transparency criticisms. Students will "learn by doing."

#### 2521 - A18 PHOTOGRAPHY WORKSHOP

For those interested in improving camera techniques and making better pictures. How to operate your camera and other types of equipment. Dark room used for developing, printing, and enlarging. Movies and slides in color and black and white will be made. Photo-flash and photo-flood lighting used at most sessions. Bring your camera kit.

#### 2522 - A18 CREATIVE PHOTOGRAPHY

For students with a knowledge of photographic techniques. How to see, record, and share images and impressions of the beauty in everyday subjects through Photography.

#### 2523 - A18 PORTRAIT PHOTOGRAPHY

Learn to personalize your subjects by proper use of lighting, composition, and camera angle. The various steps to be covered will include negative retouching photographic painting with oils, and proper use of dyes in spotting prints. The student should have some knowledge of photography.

#### 2524 - A33 HOME NURSING

Designed to give homemakers an opportunity to learn to give safe, adequate and efficient care to the well and ill members of the family. Rehabilitation, long term illnesses, self-help, aged, are all emphasized. Red Cross certificate issued.

#### 2525 - A42 RAPID READING

Designed to improve reading rate and techniques of the average or better than average reader. Filmed stories are shown to speed up and improve reading techniques. Most people improve from 50-100% in reading achievement.

#### 2526 - A42 BASIC READING

Presents reading instructions to the reader who wants to improve skills and comprehend word usage, dictionary skills, spelling and reference skills.

#### 2527 - A15 PATTERNS FOR RETIREMENT

In your middle years, begin to plan and prepare for a happy successful second career. Guest experts will be brought in to discuss with you planning for financial independence, maintenance of health, good housing, maintaining good personal contacts, constructive use of your increased leisure time.

#### 2528 - A36 BEGINNING SEWING

Basic information necessary for the successful construction of a simple garment or garments from a pattern during the course. Ability to operate a sewing machine with ease. Ability in selecting proper pattern size and knowledge in fabric selection.

#### 2529 - A36 ADVANCED SEWING

Further development of skill in clothing construction techniques.

#### 2530 - A36 BEGINNING TAILORING

Fundamental techniques and procedures, construction, use and development of basic patterns selection and use of commercial patterns, garment construction; remodeling; fitting; pressing and finishing; elementary tailoring; study of the integrated wardrobe.

#### 2531 - A18 BEGINNING ART

Still-life compositions perspective and color theory. Media used will be charcoal, crayon, pastels, and oils.

#### 2532 - A18 PORTRAITURE

Charcoal, crayon, pastel and oils. Freehand drawing.

#### 2533 - A42 READING ACCELERATION

Techniques of concentration, comprehension, retention, vocabulary, development with the aids of SRA Reading Labs and speed building machines.

**2534 - A42 CREATIVE WRITING**

Fiction and non-fiction for publications.

**2535 - A42 GREAT BOOKS DISCUSSION I**

Informal meeting can be arranged to discuss great books.

**2536 - A27 COIN COLLECTING**

History of coinage, coin collecting for pleasure and investments.

**2537 - A18 JEWELRY MAKING**

Would you like to make a new ring, a bracelet, or a beautiful pin? Work in metal? Learn silver soldering, gem setting, the use of fine abrasives and jewelry making tools. All students work on individual projects. Designs are suggested.

**2538 - A18 LEATHERCRAFTS**

Here is your chance to learn to make such useful things as billfolds, key containers, book covers, desk sets, moccasins, and belts. Group and individual instruction is given in tooling, stamping, carving, and other leather craft processes.

**230 - A27 CIVIL SERVICE PREPARATION**

Learn to prepare for civil service examinations offered by the city, state, and Federal government. You will be given information about application procedures and opportunities to gain experience with testing materials similar to those used in civil service tests. Intensive review of basic math and the development of verbal skills are included.

**2540 - A15 FINANCIAL PLANNING**

This course teaches how to embark on an investment program that has enabled participants to acquire wealth. Students will obtain a useful understanding of the functions of banks, insurance companies, the stock market, and all forms of investments.

**2541 - A27 RETIREMENT (PROBLEMS AND ENJOYMENT)**

This course is for retired adults and those older adults who desire to prepare themselves for retirement. Problems of income maintenance, living arrangements and housing, health and rehabilitation, spiritual needs and recreation are considered. The aim is to help the older adult prepare himself for independence during his retired years.

**2542 - E89 HORSESHOEING**

Class is for people who own pleasure horses and want to learn to shoe them properly, also, instructions given in proper handling, trimming, shaping of shoes, corrective measuring and applying shoes.

## ADVANCEMENT LABORATORY

The purposes of the Caldwell Community College Advancement Laboratory are threefold: to provide necessary materials and facilities to help adults prepare for the high school equivalency examination, to help students and adults gain educational improvement of their own choosing, and to help students remedy academic deficiencies.

The following pages comprise a list of the courses presently offered in the advancement tab with a brief description of each course. The initials "A.C.T.," found in parentheses at the end of each course description, represent the words "approximate completion time." It should be kept in mind that these figures are only estimates for the average student and that each student will function best at his own rate and, therefore, it is impossible to determine the exact time necessary for an individual to complete any given course. New courses of study are added regularly.

The only necessary materials an applicant need furnish are pencil and paper, and the only requirement is that he be at least sixteen years old.

## ADVANCEMENT LABORATORY

### COURSE OFFERINGS

#### BUSINESS

##### Course

##### Description

**Business Mathematics**—This is a series of four courses made up of the following:

1. Fundamentals of Business Mathematics.
2. Interest, Negotiable Instruments, and Payroll Mathematics.
3. Business Mathematics in Management Decisions.
4. Mathematics of Accounting and Finance. (A.C.T. complete—75 hours)

**Basic Filing**—A short course designed on the alphabetic system of filing. (A.C.T. —15 hours)

**Stenospeed**—An "ABC" shorthand. Dictation is given on tape. (A.C.T.—45 hours)

**Bookkeeping (Temac)**—A basic course for the beginner, written on a high school level. (A.C.T.—20 hours)

**The Accounting Process**—A fundamental course in the principles of accounting. (A.C.T.—12 hours)

## COMPUTER-RELATED PROGRAMS

Course	Description
<b>Introduction to Binary Arithmetic</b>	—Binary Arithmetic (base 2) is the math through which computers operate. (A.C.T.—4 hours)
<b>Introduction to Transistors</b>	—Deals mainly with transistors related to the structure and function of computers. (A.C.T.—12 hours)
<b>Basic Transistor Circuits</b>	—This course is based on an Auto-Instructional Teaching Text on Digital Computer Fundamentals developed by the Raytheon Company. (A.C.T.—12 hours)
<b>Introduction to Electronic Data Processing</b>	—This is a basic course dealing with the why and how of computers. (A.C.T.—20 hours)
<b>Required Cobol - 1961</b>	—This is an extensive course dealing with the language of computers. (A.C.T.—120 hours)

## ENGLISH

Course	Description
<b>2200, 2600, 3200</b>	—A series comprising a complete grammar program that covers seventh grade through high school level. The student is placed in one of the three courses depending on which his need might be. (A.C.T. for each—45 hours)
<b>Programmed English</b>	—A complete freshman college level grammar course. (A.C.T.—50 hours)
<b>300 Commas</b>	—A short course in the proper use of commas. (A.C.T.—8 hours)
<b>Lessons for Self-Instruction in Basic Skills</b>	—A series made up of short courses in areas that tend to give problems in grammar. The short courses include: <ol style="list-style-type: none"><li>1. Capitalization.</li><li>2. Punctuation.</li><li>3. Sentence Patterns.</li><li>4. Verbs, Number, and Case. (A.C.T. for each course—5 hours)</li></ol>
<b>Spelling</b>	—An elementary spelling course, including basic spelling rules and procedures for using the dictionary. (A.C.T.—25 hours)
<b>Words</b>	—A basic course in vocabulary development, written on a junior high school level. (A.C.T.—15 hours)
<b>Vocabulary Building</b>	—This course teaches the meaning and usage of pre-fixes, suffixes, stems, word families, and groups. (A.C.T.—8 hours)
<b>Improving Your Written Communication</b>	—A course designed primarily to improve business-oriented correspondence. (A.C.T.—8 hours)

## FOREIGN LANGUAGE

Course	Description
<b>Programmed French</b>	—A French reading and writing course, teaching an active vocabulary of over 1600 words and a passive vocabulary of 900 more words. (A.C.T.—90 hours)
<b>Basic German</b>	—A basic reading course, carrying the student through most of the verb tenses. The phonetic vocabulary is taught on tape. (A.C.T.—50 hours)
<b>Basic Spanish</b>	—An extensive course in reading and writing, with the phonetic vocabulary taught on tape. (A.C.T.—180 hours)

## GENERAL INTEREST

Course	Description
<b>The Analysis of Behavior</b>	A survey of terms and concepts applied in a study of animal behavior. (A.C.T.—12 hours)
<b>Your Study Skills</b>	A simple approach to the problem of learning how to study. (A.C.T.—4 hours)

## READING

### COMPREHENSIVE READING

Course	Description
<b>Reading Laboratories</b>	Programs designed to improve the student's ability to retain what he reads. Work is also done on vocabulary development and grammar usage with a resulting effect on spelling. The course covers all grade levels.
<b>Reading for Understanding</b>	A reading course designed to develop or re-develop concentration processes. This program is especially helpful to students who have been out of school for an extended length of time.

## SPEED READING

Course	Description
<b>Craig Reading Program</b>	A program using a student-controlled machine to increase reading rate and eye coordination. A workbook is also used to insure that comprehension does not suffer with the increase in speed.
<b>Reading Accelerator</b>	A program using a device that is placed over a workbook. A slide moves down the page at a rate established by the student.

## MATHEMATICS

Course	Description
<b>Univox Arithmetic</b>	This course is written at a very elementary level, with emphasis on the four basic operations. (A.C.T.—25 hours)
<b>Multiplication and Division (T.M.I.)</b>	This is an elementary course in the two basic operations mentioned (A.C.T.—20 hours)
<b>A.S.M.D. (B.R.L.)</b>	This is also a basic course in the four arithmetic operations, with one book devoted to each operation. (A.C.T.—8 hours per book)
<b>Basic Math (Temac)</b>	This is an extensive course in the basic math processes, fractions, percents, and decimals, with emphasis on both theory and application. (A.C.T.—150 hours)
<b>Basic Math Measurement</b>	This program works with the more common mathematical measurements, including those related to geometric figures. (A.C.T.—30 hours)
<b>Seventh-Grade Mathematics</b>	This program is much like the "Basic Math" course mentioned above, but it is written on a higher reading level. It also carries the student completely through high school general math. (A.C.T.—130 hours)

**Fractions (Tutor Text)**—This is a very thorough program in both the theory and application of fractions. It is written on a relatively-high reading level. (A.C.T.—12 hours)

**Decimal Numbers (T.M.I.)**—This is a two-volume, elementary program in decimal numbers. (A.C.T.—20 hours)

**Computing Square Roots**—This is a short, efficient method for teaching the theory and application of square roots. (A.C.T.—3 hours)

**Introduction to Probability**—This program supplies a simple method for learning an interesting subject. (A.C.T.—2 hours)

**Lessons for Self-Instruction in Basic Skills**—This is a series of short courses, including units on addition, subtraction, multiplication, and division. Work is done with whole numbers, fractions, decimals, and percents. (A.C.T.—4 hours for each unit)

**An Introduction to Verbal Problems in Algebra (Temac)**—This is a basic, introductory course and requires only a basic understanding of algebra. (A.C.T.—20 hours)

**Algebra I and Algebra II (Temac)**—These are extensive programs parallel with the ones taught in the public schools. When a student completes these courses, he is prepared for college algebra. (A.C.T.—150 each)

**Plane Geometry (Temac)**—This is a very thorough program, requiring some background in algebra as a prerequisite. (A.C.T.—80 hours)

**Solid Geometry (Temac)**—A complete course requiring plane geometry as a prerequisite. (A.C.T.—50 hours)

**Trigonometry (Temac)**—A college-level trig course requiring a good background in algebra. (A.C.T.—80 hours)

**Analytic Trigonometry (Temac)**—A course using trig functions and the field of complex numbers. (A.C.T.—80 hours)

**Introductory Calculus**—This course goes into both differential and integral calculus. (A.C.T.—50 hours)

**Practical Mathematics (Tutor Text)**—A practical application of algebra is taught for business; technical, and laboratory situations, as well as for every-day use. (A.C.T.—15 hours)

**The Slide Rule (Tutor Text)**—A thorough course on the mechanics of the slide rule as well as practical applications. It covers up to the log-log scales. A good foundation in math is needed for this course. (A.C.T.—15 hours)

**Advanced Slide Rule**—A course specifically designed to be used with the log-log duplex trig, and log-log duplex decitrig slide rules. (A.C.T.—35 hours)

**Logarithms**—A short course dealing with four-place logarithms, antilogs, multiplication, division, raising to powers, finding roots, and problems involving all operations. (A.C.T.—6 hours)

**Introduction to Modern Math (Behavioral Research)**—Introductory course to the concepts involved in the new approach to learning math.

**Modern Mathematics for the Junior High School (Temac)**—A four-volume course presenting the “new” or “modern” math on a junior high level. (A.C.T.—120 hours)

**Modern Algebra (Temac)**—A six-unit, modern approach to traditional algebra. (A.C.T.—150 hours)

## SCIENCE

Course	Description
<b>Biology and Chemistry</b>	A high school level science course covering the subjects in general terms. There are no actual laboratory experiments. (A.C.T.—40 hours)
<b>Work and Machines</b>	A high school level physics course. There are no actual experiments. (A.C.T.—20 hours)
<b>Measurements, Meteorology, and Astronomy</b>	A course offering the essentials in each area. (A.C.T.—40 hours)
<b>Sound, Light, Electricity, and Communication</b>	A course offering the essentials in each area mentioned. (A.C.T.—40 hours)
<b>Physical Science Program</b>	A series made up of the following units: <ol style="list-style-type: none"><li>1. Mechanics.</li><li>2. Engines.</li><li>3. Astronomy.</li><li>4. Geology.</li><li>5. Meteorology.</li></ol> (A.C.T.—8 hours each unit)
<b>Vectors</b>	A physics course requiring only a basic knowledge of algebra as a prerequisite. (A.C.T.—12 hours)
<b>Principles of Chemistry</b>	An extremely thorough, theory-oriented, freshman college level course. No lab work is involved. (A.C.T.—180 hours)

## SOCIAL STUDIES

Course	Description
<b>Geography of the U.S. (Univox)</b>	A short, elementary course used mostly with students who have reading difficulties. (A.C.T.—15 hours)
<b>Geography of the U.S. (B.R.L.)</b>	A complete course with extensive map study. (A.C.T.—40 hours)
<b>Maps: How We Read Them</b>	A short course using maps of the United States as examples. (A.C.T.—4 hours)
<b>History of the United States</b>	Covers general U.S. history from the early explorers through the present. (A.C.T.—20 hours)
<b>How a Bill Becomes a Law</b>	A government-related course touching almost every phase of the process of a bill becoming a law and other congressional-related topics. (A.C.T.—15 hours)
<b>The Constitution</b>	A course dealing with the Constitution from its historical background to the most recent amendments. (A.C.T.—15 hours)

# COURSES OF STUDY

CALDWELL COMMUNITY COLLEGE OFFERS THE FOLLOWING PROGRAMS OF STUDY:

## ASSOCIATE IN ARTS OR SCIENCE DEGREE

GENERAL EDUCATION CURRICULUM  
PRE-BUSINESS ADMINISTRATION  
PRE-BUSINESS EDUCATION  
PRE-ENGINEERING  
PRE-LIBERAL ARTS  
PRE-RECREATIONAL  
PRE-SCIENCE  
PRE-TEACHING—ELEMENTARY AND SECONDARY

## ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAMS

BUSINESS ADMINISTRATION  
DRAFTING AND DESIGN TECHNOLOGY  
ELECTRONIC DATA PROCESSING  
FURNITURE PRODUCTION ASSISTANT  
LIBRARY TECHNICAL ASSISTANT PROGRAM  
RECREATIONAL THERAPY TECHNOLOGY  
SECRETARIAL SCIENCE  
EXECUTIVE SECRETARY  
MEDICAL SECRETARY  
GENERAL CLERICAL (1 YEAR DIPLOMA)

## DIPLOMA PROGRAMS

AUTOMOTIVE MECHANICS  
COSMETOLOGY  
ELECTRICAL INSTALLATION  
AND MAINTENANCE  
FURNITURE PRODUCTION ASSISTANT (1 YEAR)  
MACHINE SHOP

MECHANICAL DRAFTING  
OPERATING ROOM ASSISTANT  
PRACTICAL NURSE EDUCATION  
TEXTILE PRODUCTION ASSISTANT  
UPHOLSTERY  
WELDING

### PROJECTED CURRICULA

To provide curricula that will reflect the changing needs of our community and the training patterns for employment, Caldwell Community College has the approval of the Department of Community Colleges and the State Board of Education to offer additional curricula other than those listed in the present catalog. The curricula listed below can and will be offered as demand and physical facilities are provided:

Carpentry  
Electromechanical Mechanics

Textile Production (Full Time)  
Manufacturing Engineering Technology



# COLLEGE TRANSFER CURRICULA

## SUGGESTED PROGRAMS OF STUDY LEADING TO ASSOCIATE IN ARTS DEGREE

The pre-professional curricula offered by Caldwell Community College and Technical Institute are listed on the following pages. These programs parallel in content those offered by most four-year institutions.

Requirements to professional programs vary among schools, colleges and universities. The following programs suggest certain courses for students planning to transfer. It is imperative that the student make an early decision on the institution to which he wishes to transfer and then elect the courses which will allow him to meet the requirements of that institution. Counselors and faculty advisors may suggest deviations from the following guides when it is evident that a particular course or sequence of courses is not appropriate for the four-year college or university to which the student expects to transfer.

## GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE IN ARTS OR ASSOCIATE IN SCIENCE DEGREE

Associate in Arts candidates must complete the following general education courses or equivalents in addition to approved electives for a minimum of 96 credit hours with an overall grade point average of 2.0 ("C") or better:

### Quarter Hours Credit

Communications Arts

12

This requirement is met by completing English 101, 102, 103, and Speech 101

	Qtr. Hrs.
Humanities	15
This requirement will be met by selecting 9 hours from "A" below and 6 hours from "B" below.	
A. Literature, or Advanced Foreign Language	
B. Music, Art, or Philosophy	
Mathematics	5-10
This requirement shall be met by taking the most advanced mathematics for which the student is qualified.	
Natural Science	12
(Biology, Physical Science, Physics, Chemistry) (It is recommended that 3 quarters of <i>one</i> science be selected.)	
Social Science	15
History 101, 102, 103	
Six hours from any of the following:	
Economics, Geography, Political Science, Sociology or Psychology	
Physical Education*	6
Guidance	1
(All entering freshmen must take GUI 101 or an approved equivalent.)	
Electives	25-30

\*All students wishing to be exempt from the Physical Education Requirements due to physical disability must first consult with the Department of Physical Education. Every effort will be made to involve each student in some type of activity. Students exempt from the required physical education program because of physical disability will be required to take PED 180, Personal and Community Health.

## GENERAL EDUCATION CURRICULUM

The program outlined below is designed for those students who do not have a definite educational objective, but who wish to take a program of studies which will allow flexibility in transferring or which will be of value to the general cultural development of the students.

### FRESHMAN YEAR

Course No.	Course Title	Qtr. Hrs.
FALL QUARTER		
GUI 101	Introduction to Education .....	1
ENG 101	Grammar & Composition I .....	3
HIS 101	World Civilization I .....	3
MAT 101	College Math or	
MAT 111	College Algebra .....	5
	Elective or Foreign Language .....	3
	Physical Education .....	1
		<hr/>
		16

**WINTER QUARTER**

ENG 102	Grammar & Composition II .....	3
HIS 102	World Civilization II .....	3
MAT 102	College Math II or	
MAT 112	Trigonometry .....	5
SPH 101	Fundamentals of Speech .....	3
	Elective or Foreign Language .....	3
	Physical Education .....	1
		<hr/> 18

**SPRING QUARTER**

ENG 103	Grammar & Composition III .....	3
HIS 103	World Civilization III .....	3
MAT 103	College Math III or	
MAT 113	Analytic Geometry &	
	Calculus I .....	5
PSY 201	General Psychology .....	3
	Elective or Foreign Language .....	3
	Physical Education .....	1
		<hr/> 18

**SOPHOMORE YEAR**

Course No.      Course Title

**FALL QUARTER**

ENG 201	English Literature I .....	3
	Social Science Elective .....	3
PHI 201	Introduction to Philosophy .....	3
	Natural Science Elective .....	4
	Electives .....	3-6
	Physical Education .....	1
		<hr/> 17-20

**WINTER QUARTER**

ENG 202	English Literature II .....	3
	Social Science Elective .....	3
	Natural Science Elective .....	4
ART 101	Introduction to Art .....	3
	Electives .....	3-6
		<hr/> 16-19

**SPRING QUARTER**

ENG 203	English Literature III .....	3
	Natural Science Elective .....	4
	Social Science Elective .....	3
SOC 201	General Sociology .....	3
	Electives .....	3-6
		<hr/> 16-19

**PRE-BUSINESS ADMINISTRATION****FRESHMAN YEAR**

Course No.      Course Title

**FALL QUARTER**

GUI 101	Introduction to Education .....	1
ENG 101	Grammar & Composition I .....	3
HIS 101	World Civilization I .....	3
MAT 101	College Math I or	
MAT 111	College Algebra .....	5

		Qtr. Hrs.
BUS 101	introduction to Business .....	5
	Physical Education .....	1
		<hr/>
<b>WINTER QUARTER</b>		
ENG 102	Grammar & Composition II .....	3
HIS 102	World Civilization II .....	3
SPH 101	Fundamentals of Speech .....	3
MAT 102	College Math II or	
MAT 112	College Trigonometry .....	5
MUS 101	Introduction to Music .....	3
	Physical Education .....	1
		<hr/>
		18

<b>SPRING QUARTER</b>		
ENG 103	Grammar & Composition III .....	3
HIS 102	World Civilization III .....	3
PSY 201	Gen. Psychology .....	3
SOC 201	Gen. Sociology .....	3
BUS 112	Personal Finance .....	3
	Physical Education .....	1
		<hr/>
		16

## SOPHOMORE YEAR

Course No.	Course Title	
<b>FALL QUARTER</b>		
ENG 201	English Literature I .....	3
	Natural Science Elective .....	4
ECO 201	Economics I .....	3
BUS 120	Principles of Accounting I .....	3
PHI 201	Intro. to Philosophy .....	3
	Physical Education .....	1
		<hr/>
		17

<b>WINTER QUARTER</b>		
ENG 202	English Literature II .....	3
	Natural Science Elective .....	4
ECO 202	Economics II .....	3
BUS 121	Principles of Accounting II .....	3
	Social Science Elective .....	3
	Physical Education .....	1
		<hr/>
		17

<b>SPRING QUARTER</b>		
	Natural Science Elective .....	4
ECO 203	Economics III .....	3
BUS 122	Principles of Accounting III .....	3
	Social Science Elective .....	3
	Elective .....	3
	Physical Education .....	1
		<hr/>
		17

Students pursuing the Bachelor of Arts Degree should select Foreign Language through the Intermediate Level.

**PRE-BUSINESS EDUCATION****FRESHMAN YEAR**

Course No.	Course Title	
<b>FALL QUARTER</b>		
GUI 101	Introduction to Education .....	1
ENG 101	Grammar & Composition I .....	3
HIS 101	World Civilization I .....	3
MAT 101	College Math I or	
MAT 111	College Algebra .....	5
BUS 102	*Typewriting .....	3
	Physical Education .....	1
		<hr/>
		16

**WINTER QUARTER**

ENG 102	Grammar & Composition II .....	3
HIS 102	World Civilization II .....	3
MUS 101	Introduction to Music .....	3
SPH 101	Fundamentals of Speech .....	3
BUS 103	*Typewriting .....	3
	Physical Education .....	1
		<hr/>
		16

**SPRING QUARTER**

ENG 103	Grammar & Composition III .....	3
HIS 103	World Civilization III .....	3
BUS 104	*Typewriting .....	3
PSY 201	Gen. Psychology .....	3
SOC 201	Gen. Sociology .....	3
	Physical Education .....	1
		<hr/>
		16

**SOPHOMORE YEAR**

Course No.	Course Title	
<b>FALL QUARTER</b>		
ENG 201	English Literature I .....	3
	Natural Science Elective .....	4
BUS 106	*Shorthand .....	3
ECO 201	Principles of Economics I .....	3
BUS 120	Principles of Accounting I .....	3
	Physical Education .....	1
		<hr/>
		17

**WINTER QUARTER**

ENG 202	English Literature II .....	3
	Natural Science Elective .....	4
BUS 107	*Shorthand .....	3
ECO 202	Principles of Economics II .....	3
BUS 121	Principles of Accounting II .....	3
	Physical Education .....	1
		<hr/>
		17

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\* Advanced placement given based on level of achievement.

**SPRING QUARTER**

	Natural Science Elective .....	4
BUS 108	*Shorthand .....	3
ECO 203	Principles of Economics III .....	3
BUS 122	Principles of Accounting III .....	3
	Elective .....	3
	Physical Education .....	1
		<hr/>
		17

**PRE-ENGINEERING****FRESHMAN YEAR**

Course No.      Course Title

**FALL QUARTER**

GUI 101	Orientation .....	1
ENG 101	Grammar & Composition I .....	3
HIS 101	World Civilization I .....	3
MAT 111	College Algebra .....	5
CHM 101	Gen. Chemistry I .....	4
	Physical Education .....	1
		<hr/>
		17

**WINTER QUARTER**

ENG 102	Grammar & Composition II .....	3
HIS 102	World Civilization II .....	3
MAT 112	College Trigonometry .....	5
EGR 101	Eng. Graphics I .....	3
CHM 102	Gen. Chemistry II .....	4
	Physical Education .....	1
		<hr/>
		19

**SPRING QUARTER**

ENG 103	Grammar & Composition III .....	3
HIS 103	World Civilization III .....	3
MAT 113	Analytic Geo. & Calculus I .....	5
CHM 103	Gen. Chemistry III .....	4
EGR 102	Eng. Graphics II .....	3
	Physical Education .....	1
		<hr/>
		19

**SOPHOMORE YEAR**

Course No.      Course Title

**FALL QUARTER**

ENG 201	English Literature I .....	3
MAT 201	Analytic Geo. & Calculus II .....	5
PHY 201	Physics I .....	4
ECO 201	Principles of Economics I .....	3
CHM 201	Qualitative Analysis .....	5
	Physical Education .....	1
		<hr/>
		21

		Qtr. Hrs.
<b>WINTER QUARTER</b>		
ENG 202	English Literature II .....	3
ECO 202	Principles of Economics II .....	3
MAT 202	Analytic Geo. & Calculus III .....	5
PHY 202	Physics II .....	4
SPH 101	Fund. of Speech .....	3
	Physical Education .....	1
		<hr/> 19

<b>SPRING QUARTER</b>		
PHY 203	Physics III .....	4
MAT 220	Differential Equations .....	5
ECO 203	Principles of Economics III .....	3
	*Elective .....	0-3
	Elective .....	3
	Physical Education .....	1
		<hr/> 16-19

\* Electives may be selected to meet requirements of the institution to which student plans to transfer.

## LIBERAL ARTS

### FRESHMAN YEAR

Course No.              Course Title

#### FALL QUARTER

GUI 101	Introduction to Education .....	1
ENG 101	Grammar & Composition I .....	3
HIS 101	World Civilization I .....	3
MAT 101	College Math I or	
MAT 111	College Algebra .....	5
	*Foreign Language or	
	**Elective .....	3
	Physical Education .....	1
		<hr/> 16

#### WINTER QUARTER

ENG 102	Grammar & Composition II .....	3
HIS 102	World Civilization II .....	3
MUS 101	Intro. to Music .....	3
SPH 101	Fund. of Speech .....	3
	Foreign Language or	
	**Elective .....	3
	Physical Education .....	1
		<hr/> 16

#### SPRING QUARTER

ENG 103	Grammar & Composition III .....	3
HIS 103	World Civilization III .....	3
PSY 201	General Psychology .....	3
SOC 201	General Sociology .....	3
	Foreign Language or	
	**Elective .....	3
	Physical Education .....	1
		<hr/> 16

\* Students with credit for two high school units of Spanish should enroll in SPA 201.

\*\* Electives should be selected to meet requirements of the institution to which students plan to transfer.

**SOPHOMORE YEAR**

Course No.	Course Title	
<b>FALL QUARTER</b>		
ENG 201	English Literature I .....	3
PHI 201	Intro. to Philosophy .....	3
	Natural Science Elective .....	4
	Foreign Language or	
	**Elective .....	3
	Physical Education .....	1
	Elective** .....	3
		<hr/>
		17

<b>WINTER QUARTER</b>		
ENG 202	English Literature II .....	3
ART 101	Introduction to Art .....	3
	Natural Science Elective .....	4
	Foreign Language or	
	Elective .....	3
	**Elective .....	3
	Physical Education .....	1
		<hr/>
		17

<b>SPRING QUARTER</b>		
GEO 201	Physical Geography .....	4
POL 203	State & Local Govt. ....	3
	Natural Science Elective .....	4
	Foreign Language or	
	Elective .....	3
	**Elective .....	3
	Physical Education .....	1
		<hr/>
		18

**PRE-RECREATIONAL**

**FRESHMAN YEAR**

Course No.	Course Title	
<b>FALL QUARTER</b>		
GUI 101	Introduction to Education .....	1
ENG 101	Grammar & Composition I .....	3
HIS 101	World Civilization I .....	3
MAT 101	College Math or College	
MAT 111	Algebra .....	5
REC 101	Intro. to Rec. Services .....	3
	*Foreign Language .....	3
	Physical Education .....	1
		<hr/>
		19

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\* Students with credit for two high school units of Spanish should enroll in SPA 201.

\*\* Electives should be selected to meet requirements of the institution to which student plans to transfer.

**WINTER QUARTER**

MUS 101	Intro. to Music .....	3
ENG 102	Grammar & Composition II .....	3
HIS 102	World Civilization II .....	3
SPH 101	Fund. of Speech .....	3
	Foreign Language .....	3
	**Elective .....	3
	Physical Education .....	1
		<hr/>
		19

**SPRING QUARTER**

SOC 201	Gen. Sociology .....	3
ENG 103	Grammar & Composition III .....	3
HIS 102	World Civilization III .....	3
REC 105	Recreational Areas and Facilities .....	3
	Foreign Language .....	3
	**Elective .....	3
	Physical Education .....	1
		<hr/>
		19

**SOPHOMORE YEAR**

Course No.      Course Title

**FALL QUARTER**

PSY 201	Gen. Psychology .....	3
ENG 201	English Literature I .....	3
PHI 201	Intro. to Philosophy .....	3
REC 201	Recreational Adm. ....	3
	Natural Science Elective .....	4
	**Elective .....	3
	Physical Education .....	1
		<hr/>
		20

**WINTER QUARTER**

POL 201	Fed. Government .....	3
ENG 202	English Literature II .....	3
	**Elective .....	3
ECO 200	Economics .....	3
ART 101	Intro. to Art .....	3
	Natural Science Elective .....	4
	Physical Education .....	1
		<hr/>
		20

**SPRING QUARTER**

EDU 201	Principles of Education .....	3
GEO 201	Physical Geography .....	4
ENG 203	English Literature III .....	3
	Natural Science Elective .....	4
	**Elective .....	3
	Physical Education .....	1
		<hr/>
		18

\* Students with credit for two high school units of Spanish should enroll in SPA 201.

\*\* Electives should be selected to meet requirements of the institution to which student plans to transfer.

# PRE-SCIENCE

## FRESHMAN YEAR

Course No.	Course Title	
<b>FALL QUARTER</b>		
GUI 101	Introduction to Education .....	1
ENG 101	Grammar & Composition I .....	3
MAT 111	College Algebra .....	5
	*Natural Science Elective .....	4
HIS 101	World Civilization I .....	3
	Physical Education .....	1
		<hr/>
		17
<b>WINTER QUARTER</b>		
ENG 102	Grammar & Composition II .....	3
HIS 102	World Civilization II .....	3
MAT 112	College Trigonometry .....	5
	*Natural Science Elective .....	4
SPH 101	Fundamentals of Speech .....	3
	Physical Education .....	1
		<hr/>
		19
<b>SPRING QUARTER</b>		
ENG 103	Grammar & Composition III .....	3
HIS 103	World Civilization III .....	3
MAT 113	Analytic Geo. & Calculus I .....	5
	*Natural Science Elective .....	4
	Elective .....	3
	Physical Education .....	1
		<hr/>
		19

## SOPHOMORE YEAR

Course No.	Course Title	
<b>FALL QUARTER</b>		
ENG 201	English Literature I .....	3
MAT 201	Analytic Geo. & Calculus II .....	5
	*Natural Science Elective .....	4
PSY 201	Gen. Psychology .....	3
	Foreign Language or	
	Elective .....	3
	Physical Education .....	1
		<hr/>
		19
<b>WINTER QUARTER</b>		
ENG 202	English Literature II .....	3
MAT 202	Analytic Geo. & Calculus III .....	5
ECO 200	Economics .....	3
	*Natural Science Elective .....	4
	Foreign Language or	
	Elective .....	3
	Physical Education .....	1
		<hr/>
		19

\* Natural Science Elective should relate to teaching field.

**SPRING QUARTER**

GEO 201	Physical Geography .....	4
POL 203	State and Local Government .....	3
	*Natural Science Elective .....	4
	Foreign Language or Elective .....	3
	Elective .....	3
	Physical Education .....	1
		<hr/>
		18

**PRE-TEACHING****FRESHMAN YEAR**

Course No.      Course Title

**FALL QUARTER**

GUI 101	Introduction to Education .....	1
ENG 101	Grammar & Composition I .....	3
HIS 101	World Civilization I .....	3
MAT 101	College Math or	
MAT 111	*College Algebra .....	5
	Natural Science Elective .....	4
	Physical Education .....	1
		<hr/>
		17

**WINTER QUARTER**

MUS 101	Introduction to Music .....	3
ENG 102	Grammar & Composition II .....	3
HIS 102	World Civilization II .....	3
MAT 102	College Math II or	
MAT 112	*College Trigonometry .....	5
	Natural Science Elective .....	4
	Physical Education .....	1
		<hr/>
		19

**SPRING QUARTER**

ENG 103	Grammar & Composition III .....	3
HIS 102	World Civilization III .....	3
MAT 103	College Math III or	
MAT 113	Analytic Geometry and	
	*Calculus .....	5
	Natural Science Elective .....	4
	Elective .....	3
	Physical Education .....	1
		<hr/>
		19

**SOPHOMORE YEAR**

Course No.      Course Title

**FALL QUARTER**

ENG 201	English Literature I .....	3
PSY 201	General Psychology .....	3
PHI 201	Intro. to Philosophy .....	3
	Political Science .....	
	Elective .....	3
	**Elective .....	3
	Physical Education .....	1
		<hr/>
		16

\* One planning to teach mathematics or natural science in high school should take College Algebra and Trigonometry, Analytical Geometry and Calculus. Physics should be taken during the sophomore year. Majors in other fields should concentrate in their disciplinary areas.

\*\* Electives should relate to teaching field, where possible.

WINTER QUARTER

ENG 202	English Literature II .....	3
SPH 101	Fund. of Speech .....	3
ECO 200	Economics .....	3
ART 101	Intro. to Art .....	3
	Social Science Elec. ....	3
**	Elective .....	3
	Physical Education .....	1
		<hr/>
		19

SPRING QUARTER

ENG 203	English Literature III .....	3
GEO 201	Physical Geography .....	4
EDU 201	Principles of Education .....	3
	Social Science Elective .....	3
**	Elective .....	3
	Physical Education .....	1
		<hr/>
		17



# TECHNICAL CURRICULA

The two-year technical curricular program is designed to prepare enrollees for technician-level occupations. More emphasis is given to theory than in vocational courses. Also, roughly one-half of the course requirements are in general education and the sciences underlying the particular occupational area.

## BUSINESS ADMINISTRATION (T 18)

### Purpose of Curriculum

In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.

### Job Description

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are potentially available in business: advertising, banking, credit, finance, retailing, wholesaling, hotel, tourist, and travel industry, insurance, transportation, and communications.

# BUSINESS ADMINISTRATION

## CURRICULUM BY<sup>a</sup> QUARTERS

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
BUS 102	Typewriting .....	2	3	3
MAT 110	Business Mathematics .....	5	0	5
BUS 101	Introduction to Business .....	5	0	5
ECO 102	Economics .....	3	0	3
		19	3	20
<b>SECOND QUARTER</b>				
T-ENG 102	Composition .....	3	0	3
T-BUS 120	Accounting .....	5	2	6
ECO 104	Economics .....	3	0	3
BUS 115	Business Law .....	3	0	3
BUS 123	Business Finance .....	3	0	3
		17	2	18
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing .....	3	0	3
BUS 124	Business Finance .....	3	0	3
T-BUS 110	Office Machines .....	2	2	3
T-BUS 121	Accounting .....	5	2	6
BUS 116	Business Law .....	3	0	3
		19	4	18
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communication .....	3	0	3
T-BUS 232	Sales Development .....	3	0	3
T-EDP 104	Introduction to Data Processing System .....	3	2	4
T-BUS 239	Marketing .....	5	0	5
	Elective .....	3	0	3
		17	2	18
<b>FIFTH QUARTER</b>				
T-ENG 206	Business Communication .....	3	0	3
T-BUS 243	Advertising .....	3	2	4
BUS 235	Business Management .....	3	0	3
	Social Science Elective .....	3	0	3
	Elective .....	3	0	3
		15	2	16
<b>SIXTH QUARTER</b>				
T-BUS 229	Taxes .....	3	2	4
T-BUS 247	Business Insurance .....	3	0	3
T-BUS 272	Principles of Supervision .....	3	0	3
T-BUS 271	Office Management .....	3	0	3
	Social Science Elective .....	3	0	3
	Elective .....	3	0	3
		18	2	19
Total Quarter Hours in Courses				94
Electives (Min.)				15
Total				109

## **DRAFTING AND DESIGN—MECHANICAL (T 43)**

### **Purpose of Curriculum**

This curriculum was prepared for the purpose of outlining a training program for students of mechanical drafting and design technology. There are certain identifiable duties which are common to all technicians of this general classification and which comprise the basic areas of technical knowledge they need. This curriculum has been designed for training persons in the accepted performance of these basic duties that will be assigned, and to enable the individual student to become proficient in a short time after he becomes employed in the industry.

Courses in general education have been included to give a student the assurance and understanding that come with education upon a broad base. The technician associates with many levels of thought and expression—administrative personnel, scientists, engineers, skilled workmen. He must be able to communicate effectively with all levels. Courses containing essential information from related subject areas, such as mathematics, physics, and mechanics have been included in order to provide the student a better academic base for his training. Emphasis is placed upon ability to think and plan. He must also be able to draw. His introduction to industry will begin on the drawing board; therefore, he must be able to perform well there.

### **Job Description**

Mechanical drafting and design technicians are concerned with the preparation of drawings for design proposals, for experimental models and items for production use.

These technicians perform many aspects of drafting in a specialized field, such as the developing of the drawing of a section, sub-assembly or major component. Investigating design factors and availability of material and equipment, production methods and facilities are frequent assignments. They assist in the design of units and controls from specifications by utilizing drawings of existing units and reports on functional performance. They may draw components in industrial fields based on engineers' original design concepts or specific ideas. Also, they may be assigned as coordinators for the execution of related work of other design, production, tooling, material and planning groups. Technicians with experience in this classification may often supervise the preparation of working drawings.

The technicians are employed in many types of manufacturing, fabrication, research development and service industries. Substantial numbers also are employed in communications, transportation, public utilities, consulting engineering firms, and federal, state, and local governments.

# DRAFTING & DESIGN—MECHANICAL

## CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
T-MAT 101	Technical Mathematics .....	5	0	5
T-PHY 101	Physics: Properties of Matter .....	3	2	4
T-DFT 101	Technical Drafting .....	2	6*	4
T-MEC 101	Machine Processes .....	0	6*	2
		14	14	19
<b>SECOND QUARTER</b>				
T-ENG 102	Composition .....	3	0	3
T-MAT 102	Technical Mathematics .....	5	0	5
T-PHY 102	Physics: Work, Energy, Power .....	3	2	4
T-DFT 102	Technical Drafting .....	2	6*	4
T-MEC 102	Machine Processes .....	0	6*	2
		13	14	18
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing .....	3	3	0
T-MAT 103	Technical Mathematics .....	5	0	5
T-PHY 103	Physics: Electricity .....	3	2	4
T-PHY 106	Applied Mechanics .....	5	0	5
T-DFT 103	Technical Drafting .....	2	6*	4
		18	8	21
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communication .....	3	0	3
T-DFT 201	Technical Drafting .....	2	6	4
T-DFT 204	Descriptive Geometry .....	2	4	4
T-MEC 205	Strength of Materials .....	3	2	4
T-MEC 210	Physical Metallurgy .....	3	3*	4
		13	15	19
<b>FIFTH QUARTER</b>				
	Social Science Elective .....	3	0	3
T-DFT 205	Design Drafting I .....	2	6*	4
T-DFT 211	Mechanisms .....	3	2	4
T-MEC 211	Physical Metallurgy .....	3	3*	4
	Elective .....	3	0	3
		14	11	18

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

SIXTH QUARTER

T-DFT 206 T-MEC 235	Social Science Elective .....	3	0	3
	Design Drafting II .....	2	6*	4
	Hydraulics & Pneumatics .....	3	3*	4
	Elective .....	3	0	3
	Elective .....	3	0	3
		14	9	17
Total Quarter Hours in Courses				97
Minimum Electives				15
Total				112

\* "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

ELECTRONIC DATA PROCESSING (T-22)

Purpose of Curriculum

The ability to process large quantities of information at high speed is a necessary prerequisite for modern technical achievements. Electronic and electromechanical systems, illustrated by the digital computer, are the most important tools for information processing, and they perform many commercial and scientific tasks too complex or too lengthy to be accomplished by manual operations alone.

Electronic data processing is that science dedicated to the solution of human problems by automatic means. These problems assume a wide variety, and computers are used for such endeavors as the maintenance of business records, the solution of mathematical and engineering problems, the control of industrial processes and tools, and the evaluation of data and languages in such fields as social science, humanities, and linguistics. Computers even find a place in such aesthetic disciplines as art and religion, where they produce graphical displays and examine biblical texts.

Many occupational specialities are needed to control a large computer system effectively. These include the positions of key punch operator, unit record machine operator and programmer, computer operator, computer programmer, systems analyst, engineer, and supervisor. The community college data processing curriculum is especially designed to prepare students for careers as computer operators and programmers for both commercial and scientific computer systems. In addition all students are given training in the operation and programming of unit record equipment, including key punch, sorter, reproducing punch, collator, and accounting machine.

# Job Description

The data processing specialist often is called upon to perform many varied tasks in a computer center. He is required frequently to operate and program both unit record machinery and the computer system. He may be a member of a programming team, whose responsibility is to prepare programs for computer solution through joint effort. He may be asked to transform the general requirements of accountants, business managers, engineers, and mathematicians into specific programs which can be efficiently executed by the computer. At intervals he may be required to update, revise, correct, and write programs as the needs of management dictate.

## DATA PROCESSING—BUSINESS

### CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
FIRST QUARTER				
GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
T-MAT 101	Technical Mathematics .....	5	0	5
T-EDP 100	Introduction to Computers .....	3	0	3
T-EDP 101	Function Wiring .....	2	2	3
T-EDP 106	Compiler Language I .....	2	2	3
		16	4	18
SECOND QUARTER				
T-ENG 102	Composition .....	3	0	3
T-MAT 214	Statistics .....	5	0	5
T-BUS 120	Accounting I .....	5	2	6
T-EDP 108	Assembler Language .....	2	4	4
		15	6	18
THIRD QUARTER				
T-ENG 103	Report Writing .....	3	0	3
T-BUS 121	Accounting II .....	5	2	6
T-EDP 202	Compiler Language II .....	2	4	4
BUS 101	Introduction to Business .....	5	0	5
		15	6	18
FOURTH QUARTER				
T-ENG 204	Oral Communication .....	3	0	3
T-EDP 208	Programming Applications I .....	2	4	4
T-EDP 214	Computer Systems I .....	2	2	3
BUS 225	Cost Accounting .....	3	2	4
T-EDP 210	Linear Programming .....	3	2	4
		13	10	18

FIFTH QUARTER

T-EDP 209	Programming Applications II .....	2	4	4
T-EDP 215	Computer Systems II .....	2	2	3
T-EDP 219	Systems and Procedures .....	3	0	3
	Social Science Elective .....	3	0	3
	Elective .....	3	0	3
		13	6	16

SIXTH QUARTER

T-EDP 217	Data Processing Project .....	1	8	5
T-BUS 255	Interpreting Accounting Records ....	3	0	3
	Social Science Elective .....	3	0	3
	Business Elective .....	3	0	3
	Elective .....	3	0	3
		13	8	17

Total Quarter Hours in Courses	90
Electives	15
Total	105

LIBRARY TECHNICAL ASSISTANT PROGRAM (T-80)

Purpose of Curriculum

There is a growing need for men and women to assist Librarians by assuming the many technical and clerical responsibilities essential to the operation of the modern library. The Library Technical Assistant is a library worker who has graduated from a program in Library Technology, usually established in a two-year institution such as a junior college or community college, with a degree of Associate of Arts with a defined major in courses in Library Technology. He is capable of work in support of professional librarians. Under their supervision, he can be expected to have sufficient knowledge and skills to perform the assigned or routine duties in the library, and in some cases to be capable of supervision of untrained library clerk personnel.

The Library Technical Assistant program is designed to prepare persons for employment in various types of libraries—public school, hospital, government, and industry. The curriculum provides a background of general education and basic library skills to prepare interested students to enter library work above the minimum clerk status. It also introduces a variety of library experience into which a trained person may enter, suiting abilities to the particular job. The library courses would be helpful as background for students desiring to enter the professional library field and the business courses could provide a good background for further business training. Thus, the graduate of the Library Technical Assistant program may enter a variety of career opportunities.

## Job Description—Library—Media Technical Assistant

DEFINITION. Library technical assistant duties are based on skills required by the library clerk, but, in addition, a proficiency developed in one or more functional areas or in certain limited phases of library service is required. Library technical assistants will generally follow established procedures which have been developed by librarians. They work under the supervision of a librarian and may supervise and direct library clerks or clerical staff. In a closely coordinated library system, a library technical assistant may be responsible for a service unit.

In this category, there may be personnel with additional qualifications such as college credits or some courses in library service whose educational background qualifies them for more independent responsibility for limited aspects of library services.

### LIBRARY TECHNICAL ASSISTANT

#### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
FIRST QUARTER				
GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
MAT 110	Business Mathematics .....	5	0	5
BUS 102	*Typewriting .....	2	3	3
T-LIB 101	Introduction to Libraries and			
	Information Centers .....	3	2	4
	Science Elective .....	3	0	3
		17	5	19
SECOND QUARTER				
T-ENG 102	Composition .....	3	0	3
BUS 103	*Typewriting .....	2	3	3
T-BUS 120	Accounting .....	5	2	6
T-LIB 102	Library Processes I .....	3	2	4
	Science Elective .....	3	0	3
		16	7	19
THIRD QUARTER				
T-ENG 103	Report Writing .....	3	0	3
BUS 104	*Typewriting .....	2	3	3
T-BUS 110	Office Machines .....	2	2	3
T-LIB 103	Library Media Resources .....	3	0	3
T-HUM 101	Humanities .....	4	0	4
T-BUS 134	Personal Development .....	3	0	3
		17	5	19

\* Advanced placement given based on level of achievement.

**FOURTH QUARTER**

T-ENG 204	Oral Communication .....	3	0	3
T-EDP 104	Introduction to Data Processing .....	3	2	4
T-LIB 201	Library Processes II .....	3	2	4
T-HUM 102	Humanities .....	4	0	4
	Elective .....	3	0	3
		16	4	18

**FIFTH QUARTER**

T-LIB 202	Library Media Procedures .....	3	0	3
T-BUS 214	Practicum .....	0	6	3
T-HUM 103	Humanities .....	4	0	4
T-LIB 203	Library Practice .....	0	6	3
	Elective .....	3	0	3
		13	8	17

**SIXTH QUARTER**

AUD 101	Equipment and Materials .....	2	2	3
T-LIB 204	Practicum .....	0	6	3
POL 203	Government .....	3	0	3
		11	8	15

Total Quarter Hours in Course	93
Electives	13
Total	106

**FURNITURE PRODUCTION ASSISTANT (T 75)**  
**(Degree Program)**

**Purpose of Curriculum**

The curriculum guide was prepared in cooperation with CCC and the area Furniture Committee. The purposes of this program are to develop the following competencies:

- 1. Better performance of the student on the job.
- 2. Train for a specific production or staff job in local Furniture Industry.
- 3. Train for jobs in production operations.
- 4. Knowledge of supervisory responsibilities as they apply to production requirements.
- 5. Knowledge in specific elements of technical operations.
- 6. Understanding the principles of organization and production operation of the furniture industry.

**Job Description**

The graduate of this program may serve in many areas of the local furniture industry. These areas would include: Assistant to Plant Manager, Methods Improvement, Quality Control In-

spector, Cost Estimators, Product Engineer Trainee, Production Control Trainee, Material Control Supervisor, Department Supervisor, Production Scheduling and Control, Material Testing, Employee Trainer, and Industry Safety.

## FURNITURE PRODUCTION ASSISTANT

### CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab	
FIRST QUARTER				
GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
MAT 110	Business Mathematics .....	5	0	5
T-FUR 104	Characteristics of Wood .....	2	0	2
T-DFT 101	Drafting .....	2	6	4
T-FUR 108	Production Equipment I .....	4	0	4
T-FUR 105	Glues .....	1	0	1
		18	6	20
SECOND QUARTER				
T-ENG 102	Composition .....	3	0	3
T-FUR 109	Production Equipment II .....	4	0	4
T-FUR 102	Construction & Billing I .....	1	3	2
T-DFT 102	Drafting .....	2	6	4
PSY 206	Applied Psychology .....	3	0	3
		13	9	16
THIRD QUARTER				
T-ENG 103	Report Writing .....	3	0	3
T-FUR 103	Construction & Billing II .....	1	3	2
BUS 101	Introduction to Business .....	5	0	5
T-FUR 106	Abrasive Material & Method .....	2	2	3
T-DFT 103	Drafting .....	2	6	4
		13	11	17
FOURTH QUARTER				
T-ENG 204	Oral Communication .....	3	0	3
T-ISC 201	Industrial Organization & Management .....	3	0	3
T-BUS 272	Principal of Supervision .....	3	0	3
T-BUS 111	Collecting & Reporting Info. ....	2	2	3
T-FUR 107	Finishing Method & Material .....	2	2	3
T-FUR 112	Routing, Scheduling & Process .....	2	2	3
		15	6	18
FIFTH QUARTER				
	Social Science Elective .....	3	0	3
T-ISC 103	Production Control .....	1	3	2
T-BUS 285	Cost Records & Estimates .....	2	0	2
T-ISC 102	Industrial Safety .....	3	0	3
T-ISC 203	Motion Study .....	3	2	4
	Elective .....	3	0	3
		15	5	17

SIXTH QUARTER

	Social Science Elective .....	3	0	3
T-ISC 207	Foremanship Supervision .....	3	0	3
T-ECO 102	Economics .....	3	0	3
T-ISC 202	Quality Control .....	3	0	3
T-ISC 204	Value Analyst .....	3	0	3
	Elective .....	3	0	3
		18	0	18
Total Quarter Hours in Course Electives				94 12
Total				106

RECREATIONAL THERAPY TECHNOLOGY (T 83)

Purpose of Curriculum

In recent years much national, state, and local attention has been focused on the lack of recreation services offered our ill and disabled citizens. With this increased emphasis, community and institutional recreation agencies and others are developing new and creative programs for the handicapped which require trained recreation leaders at all levels.

This curriculum is designed to provide recreational therapy technicians to work with the handicapped on the leadership or activity level. Major emphasis of the curriculum is placed on developing specific activity skills in arts and crafts, sports and games, music, drama, dance, and social recreation. The curriculum also provides courses which develop the students' understanding of the limitations and abilities of the handicapped as well as the techniques and skills in the adaptation of recreation activities. Student placement in various settings (hospitals for mentally ill, mentally retarded, alcoholic etc., community recreation programs) is also an integral part of the program.

Job Description

The graduate of the Recreational Therapy Technology Curriculum may enter a variety of careers in the field of recreation. In most situations the technician will work under the supervision of a professional recreator.

The majority of job opportunities for the recreational therapy technicians is available in the state institutions for the handicapped (mentally retarded, mentally ill, alcoholics, and correctional centers, etc.) but more and more community recreation departments and volunteer agencies are beginning to employ persons to work in recreation with the handicapped. The technician would also possess the skills and background knowledge

to work as an activity director in sports activities, arts and crafts and others, or to supervise and conduct programs for various recreation facilities in public, private, commercial, industrial, and institutional settings. The qualifications for different agencies vary, but most all recreation agencies offer positions at the technical level.

## RECREATIONAL THERAPY TECHNOLOGY

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
REC 101	Introduction to Recreation Services ..	3	0	3
REC 102	Introduction to the Ill & Handicaped .	3	0	3
T-REC 108	Medical Terminology & Basic Anatomy .....	3	0	3
AUD 101	Equipment and Materials.....	2	2	3
T-REC 110	Recreational Arts & Crafts .....	1	4	3
		16	6	19
<b>SECOND QUARTER</b>				
T-ENG 102	Composition .....	3	0	3
REC 121	Social Recreation .....	3	0	3
REC 103	Adaptive Phy. Ed. & Rec. Act. ....	3	0	3
T-REC 104	Rehabilitation Team .....	3	0	3
REC 109	First Aid and Safety .....	3	0	3
T-MUS 101	Recreational Music .....	1	4	3
		16	4	18
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing .....	3	0	3
REC 105	Recreational Areas & Facilities and Program Planning .....	3	0	3
REC 106	Resident & Day Camp Adm. ....	3	0	3
REC 107	Team Sports & Games In Rec. ....	1	4	3
SOC 201	Intro. to Sociology .....	3	0	3
T-REC 207	Practicum .....	0	6	2
		13	10	17
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communication .....	3	0	3
REC 201	Recreation Administration .....	3	0	3
SSC 205	American Institutions .....	3	0	3
T-REC 206	Recreational Drama .....	1	4	3
MUS 201	Folk, Square & Social Dance .....	1	4	3
T-REC 208	Practicum .....	0	6	2
		11	14	17

FIFTH QUARTER

	Social Science Elective .....	3	0	3
REC 202	Recreational Leadership .....	3	0	3
PSY 210	Human Growth & Development .....	3	0	3
T-BUS 272	Effective Supervisory Practices .....	3	0	3
REC 204	Individual Sports & Games .....	1	4	3
T-REC 209	Practicum .....	0	9	3
		<hr/>	<hr/>	<hr/>
		13	13	18

SIXTH QUARTER

	Social Science Elective .....	3	0	3
REC 203	Water-Related Sports & Activities ...	1	4	3
REC 205	Nature & Outdoor Recreation .....	3	0	3
T-REC 210	Practicum .....	0	15	5
		<hr/>	<hr/>	<hr/>
		7	19	14

Total Quarter Hours in Courses	97
Electives	6
Total	<hr/> 103

SECRETARIAL SCIENCE

(Medical and Executive)  
(T 32) (T 30)

Purpose of Curriculum

The demand for better qualified secretaries in our ever-expanding business, industry, government, and professional world is becoming more acute. The purpose of these curricula is to outline a training program that will provide training in the accepted procedures required by the business, industrial and professional areas and to enable persons to become proficient soon after employment in their particular field.

Each of the above listed curricula is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the particular area of work. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development. Courses designated by an asterick (\*) will be oriented to the major area such as medical or executive.

Job Description

The graduates of these programs should have a knowledge of the terminology peculiar to the major area, skill in dictation

and accurate transcription of all correspondence, memoranda, and reports. The graduate may be employed as a stenographer or secretary in a variety of offices in businesses such as insurance companies, banks, marketing, institutions, financial firms, doctors' offices, medical and health institutions, and government agencies.

## SECRETARIAL SCIENCE

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
GUI 101	Introduction to Education .....	1	0	1
T-ENG 101	Grammar .....	3	0	3
BUS 102	**Typewriting .....	2	3	3
MAT 110	Business Mathematics .....	5	0	5
BUS 101	Introduction to Business .....	5	0	5
BUS 106	**Shorthand .....	2	3	3
		18	6	20
<b>SECOND QUARTER</b>				
T-ENG 102	Composition .....	3	0	3
BUS 103	**Typewriting .....	2	3	3
BUS 107	**Shorthand .....	2	3	3
T-BUS 120	Accounting .....	5	2	6
BUS 115	Business Law .....	3	0	3
		15	8	18
<b>THIRD QUARTER</b>				
T-ENG 103	Report Writing .....	3	0	3
BUS 104	**Typewriting .....	2	3	3
BUS 108	**Shorthand .....	2	3	3
T-BUS 110	Office Machines .....	2	2	3
T-BUS 134	Personal Development .....	3	0	3
		12	8	15
<b>FOURTH QUARTER</b>				
T-ENG 204	Oral Communications .....	3	0	3
*T-BUS 206E	Dictation and Transcription (Executive) .....	3	2	4
*T-BUS 206M	Dictation and Transcription (Medical) .....	3	2	4
BUS 205	Advanced Typewriting .....	2	3	3
T-BUS 211	Office Machines .....	2	2	3
T-EDP 104	Introduction to Data Processing Systems .....	3	2	4
*T-BUS 183M	Terminology and Vocabulary (Medical) .....	3	0	3
	Elective (Executive) .....	3	0	3
		Executive 16	9	20
		Medical 16	9	20

\* These courses will be oriented to the major area, Medical or Executive.

\*\* Advanced placement given based on level of achievement.

FIFTH QUARTER

T-ENG 206	Business Communications .....	3	0	3
*T-BUS 207E	Dictation and Transcription (Executive) .....	3	2	4
*T-BUS 207M	Dictation and Transcription (Medical) .....	3	2	4
T-BUS 214	Secretarial Procedures .....	3	2	4
T-BUS 219	Credit Procedures and Problems (Executive) .....	3	0	3
*T-BUS 284M	Terminology and Vocabulary (Medical) .....	3	0	3
	Social Science Elective .....	3	0	3
	Executive	15	4	17
	Medical	15	2	17

SIXTH QUARTER

*T-BUS 208E	Dictation and Transcription (Executive) .....	3	2	4
*T-BUS 208M	Dictation and Transcription (Medical) .....	3	2	4
T-BUS 271	Office Management .....	3	0	3
T-BUS 247	Business Insurance .....	3	0	3
	Social Science Elective .....	3	0	3
	Elective .....	3	0	3
	Executive	15	2	16
	Medical	15	2	16
Total Quarter Hours in Courses		Medical	Executive	
		100	97	
Electives (Min.)		9	12	
Total		109	109	

\* These courses will be oriented to the major area, Medical or Executive.

GENERAL CLERICAL PROGRAM

(ONE YEAR DIPLOMA PROGRAM)

This program includes instruction and practice in all primary skills and abilities necessary for a wide variety of office occupations. A diploma is awarded for satisfactory completion of the courses. Further study is possible, full or part time, for earning an associate degree.

Course No.	Course Title	Hours Per Week		Quarter Hours
		Class	Lab	Credit
FALL QUARTER				
GUI 101	Orientation .....	1	0	1
ENG 101	English .....	3	0	3
BUS 101	Intro. to Bus. ....	5	0	5
BUS 102	Typewriting .....	2	3	3
BUS 106	Business Math .....	5	0	5
		16	3	17

Course Title		Hours Per Week Class	Lab	Quarter Hours Credit
<b>WINTER QUARTER</b>				
T-ENG 206	Bus. Communication .....	3	0	3
BUS 115	Business Law .....	3	0	3
BUS 103	*Typewriting .....	2	3	3
T-BUS 214	Secretarial Procedures .....	3	2	4
	Elective .....	3	0-2	3-4
		14	5-7	16-17

<b>SPRING QUARTER</b>				
T-BUS 110	Office Machines .....	2	2	3
BUS 104	*Typewriting .....	2	3	3
T-BUS 134	Personal Dev. ....	3	0	3
	Electives .....	6	0-4	6-8
		13	5-9	15-17

### SUMMER QUARTER

Course No.	Course Title			
T-BUS 266	Record Keeping .....	3	0	3
BUS 205	*Typewriting .....	2	3	3
	Elective .....	3	0	3
T-BUS 211	Office Machines .....	2	2	3
T-ENG 204	Oral Communications .....	3	0	3
		13	5	15

### Recommended Electives:

BUS 106-107-108	Shorthand .....	3	2	4
T-EDP 104	Intro. to Data Processing .....	3	2	4
ECO 102	Economics .....	3	0	3
ECO 108	Consumer Economics .....	3	0	3
T-BUS 271	Office Management .....	3	0	3
T-BUS 247	Business Insurance .....	3	0	3
T-ISC 201	Sociology .....	3	0	3
MAT 110	Bus. Math .....	5	0	5
T-BUS 206	Dict. & Trans. ....	3	2	4
PSY 206	Applied Psychology .....	3	0	3

\* Students who have completed one or more years of typing and shorthand in high school should see department chairman for proper placement. Placement in advanced courses requires departmental approval.

Diploma Requirements: 60 credit hours with minimums of 60 words a minute in typing and 100 words a minute in shorthand.

# **VOCATIONAL CURRICULA**

One year diploma programs designed to prepare enrollees for trade level occupations. Much emphasis is given to the development of manipulative skills.

## **AUTOMOTIVE MECHANICS (V 03)**

### **Purpose of Curriculum**

This Curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust components of automotive vehicles. Manual skills are developed in practical shop work using components mounted on stands. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, and shop practice. Diagnosing and repair work is assigned on scheduled vehicles.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks and buses powered by a variety of internal combustion engines. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

### **Job Description**

Automobile mechanics diagnose, maintain, and repair mechanical, electrical, and other component parts of passenger cars, trucks, and buses. In some communities and rural areas they also may repair body parts, service tractors, marine engines and other

types equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. They use shop manuals and other technical publications to assist in analysis, disassembly and assembly of component parts.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work, such as repairing only electrical components, power steering, power brakes, or automatic transmissions. Usually, such specialists have had "all-round" training in general automotive repair.

## CURRICULUM BY QUARTERS

Course Title		Hours Per Week Class	Lab or Shop	Quarter Hours Credit
<b>FIRST QUARTER</b>				
GUI 101	Introduction to Education .....	1	0	1
PME 1101	Internal Comb. Engines .....	3	12	7
MAT 1101	Fundamentals of Mathematics .....	3	0	3
DFT 1101	Schematics and Diagrams .....	0	3	1
	(Measurement, Tools and Engines)			
PHY 1101	Applied Science .....	3	2	4
ENG 1101	Reading Improvement .....	2	0	2
		<hr/> 12	<hr/> 17	<hr/> 18
<b>SECOND QUARTER</b>				
PME 1102	Engine Elect. and Fuel .....	5	15	10
	Systems			
DFT 1102	Schematics and Diagrams .....	1	3	2
	(Electrical and Fuel Systems)			
MAT 1120	Applied Math .....	3	0	3
ENG 1102	Communication Skills .....	3	0	3
		<hr/> 12	<hr/> 18	<hr/> 18
<b>THIRD QUARTER</b>				
AUT 1123	Brakes, Chassis and Suspension .....	3	12	7
AHR 1101	Automotive Air Conditioning .....	2	2	4
DFT 1103	Schematics and Diagrams .....	0	3	1
	(Chassis and Braking Systems)			
PSY 1101	Human Relations .....	3	0	3
WLD 1129	Basic Welding .....	2	3	3
		<hr/> 10	<hr/> 20	<hr/> 18
<b>FOURTH QUARTER</b>				
AUT 1124	Automotive Power Train Systems ...	3	12	7
AUT 1125	Auto Servicing I .....	3	9	6
BUS 1103	Small Business Operations .....	3	0	3
		<hr/> 9	<hr/> 21	<hr/> 16

## ADDITIONAL COURSES AVAILABLE

### FIFTH QUARTER

PME 1202	Auto Elect/Electronics .....	4	9	7
PME 1203	Engine Tune-Up - Auto .....	4	9	7
Elective .....		1	3	2
		9	21	16

### SIXTH QUARTER

PME 1224	Adv. Automatic Trans. ....	3	12	7
PME 1221	Front Suspension, Alignment and Power Steering .....	1	3	2
PME 1226	Auto Servicing II or Elective .....	2	9	5
		6	24	14

NOTE: A diploma may be awarded for the successful completion of a *Four-Quarter Program*.

*Co-op Summer Work* (PME 1184) may be arranged for students who are pursuing the Six-Quarter Program.

A diploma may be awarded for the successful completion of a *Six-Quarter Program*.

## COSMETOLOGY (V 09)

### Purpose of Curriculum

Today the cosmetologist is called upon to advise men and women on problems of make-up, diet, and care of the hair, skin and hands, including the nails. Cosmetology has become a science consisting of the use of cosmetics based on scientific principles. The Cosmetology Curriculum is designed to prepare the student for employment in the field of cosmetology. The curriculum provides instruction and practice in manicuring, shampooing, permanent waving, facials, massages, scalp treatments, hair shaping, and styling. This curriculum is approved by the North Carolina State Board of Cosmetic Art Examiners.

The first quarter of instruction consists of an introduction to Cosmetology including the fundamentals of ethics, history theory, and practice. The class activities include practical lessons, lectures, demonstrations, student practice on wefts and mannequins.

The second quarter of instruction places more emphasis on manipulative skills. The acquisition of correct habits and skills is stressed. Practical work is done almost exclusively on patrons and models.

The third quarter correlates theory with practice in the study of related subjects and developing more advanced artistic skills.

In the fourth quarter the students are capable of doing work and are equipped for the state examination and outside work. Each student, prior to finishing an application to the Cosmetic Arts Board for examination, is given a test both theoretical and practical.

For additional information pertaining to rules and regulations governing the Cosmetology program we refer you to Chapter 354, Public Law 1943. This publication may be obtained by writing to North Carolina State Board of Cosmetic Art Examiners, Box 1108, Raleigh, North Carolina.

## Job Description

A trained beautician is in constant demand. She can find employment in the many beauty shops found in every community. A cosmetologist performs many functions in providing beauty services for customers. Some of the functions are manicuring, shampooing, hair shaping, hair styling, hair coloring, finger waving, wig care, rinses, permanent waving, facials, scalp treatments, bleaching, and other services demanded of a beautician.

## COSMETOLOGY

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
FIRST QUARTER				
GUI 101	Introduction to Education .....	1	0	1
COS 1101	Introduction to Cosmetology .....	3	1	4
COS 1102	Diagnosis, Prevention and Treatment of Disorders I .....	3	2	4
COS 1105	Shampoo, Styling and Shaping Techniques I .....	2	11	6
COS 1107	Chemistry, Hair Coloring and Permanent Waving I .....	2	6	4
COS 118	Anatomy I .....	1	0	1
		12	20	20
SECOND QUARTER				
ENG 1102	Communication Skills .....	3	0	3
COS 1103	Bacteriology, Sanitation, First Aid ..	2	1	2
COS 1106	Shampoo, Styling and Shaping Techniques II .....	2	11	6

COS 1108	Chemistry, Hair Coloring & Permanent Waving II .....	1	8	4
COS 1119	Anatomy II .....	1	0	1
COS 1110	Manicuring .....	1	2	2
		<hr/>	<hr/>	<hr/>
		10	22	18

### THIRD QUARTER

BUS 1134	Personal Development .....	3	0	3
COS 1120	Facials .....	1	3	2
COS 1111	Hair Styling & Wig Care .....	1	3	2
COS 1109	Chemistry, Hair Coloring & Permanent Waving III .....	3	14	8
COS 1112	Hair Styling & Shampoo I .....	1	2	2
		<hr/>	<hr/>	<hr/>
		9	22	17

### FOURTH QUARTER

COS 1104	Diagnosis & Treatment of Disorders II .....	3	2	4
COS 1113	Hair Styling & Shampooing II .....	4	17	10
BUS 1103	Small Business Operations .....	3	0	3
PSY 1101	Human Relations .....	3	0	3
		<hr/>	<hr/>	<hr/>
		13	19	20

## DRAFTING—MECHANICAL (V 17)

### Purpose of Curriculum

This curriculum is designed to prepare students to enter the field of mechanical drafting. The first two quarters contain courses basic to all fields of drafting. The third and fourth quarters contain specialization and related courses that prepare one to enter mechanical drafting occupations.

Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel—administrative, architects, engineers, skilled workmen—and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics and industrial organization are provided to assist the student in developing understanding and confidence in his relations with other persons.

### Job Description

A draftsman prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions: makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various

parts to the whole structure. Makes any adjustments or changes necessary or desired. Inks in lines and letters on pencil drawings as required. Exercises manual skill in the manipulation of triangle and other drafting tools. Lays tracing paper on drawing and traces drawing in pencil or ink. Makes charts for representation of statistical data. Makes finished designs from sketches. Utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings

A mechanical draftsman performs the general duties of a draftsman and also specializes in making rough freehand and mechanical drafting sketches of proposed mechanical devices, and the drawing of necessary details. Prepares accurate scale drawings of parts or machines from specifications.

## DRAFTING—MECHANICAL

### CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
FIRST QUARTER				
GUI 101	Introduction to Education .....	1	0	1
DFT 1121	Drafting .....	3	12	7
WLD 1129	Welding .....	2	3	3
MEC 1113	Shop Processes .....	2	3	3
MAT 1101	Fundamentals of Mathematics .....	3	0	3
		11	18	17
SECOND QUARTER				
DFT 1122	Drafting .....	3	8	6
DFT 1125	Descriptive Geometry .....	2	3	3
MAT 1102	Algebra .....	5	0	5
MEC 1114	Shop Processes .....	2	3	3
PHY 1101	Applied Science .....	3	2	4
		15	16	21
THIRD QUARTER				
DFT 1131	Mechanical Drafting .....	3	9	6
MAT 1104	Trigonometry .....	3	0	3
PHY 1102	Applied Science .....	3	2	4
MEC 1123	Shop Processes .....	2	3	3
MEC 1115	Treatment of Ferrous Metals .....	2	3	3
		13	17	19
FOURTH QUARTER				
DFT 1132	Mechanical Drafting .....	3	12	7
ENG 1102	Communication Skills .....	3	0	3
MEC 1116	Treatment of Nonferrous Metals .....	2	3	3
MEC 1124	Shop Processes .....	2	3	3
DFT 1133	Technical Illustration .....	3	0	3
		13	18	19

## ELECTRICAL INSTALLATION AND MAINTENANCE (V 18)

On the completion of the Electrical Installation and Maintenance Course, one would be prepared to enter into the electrical field as an assistant electrician in any of two general areas.

1. Construction area: This would include new wiring, rewiring of residential, commercial, and industrial buildings.
2. Maintenance area: This would include installation and maintenance of motors, motor controls and industrial electronics.

He will have acquired a basic knowledge of the National Electrical Code—as to wiring design, wiring methods, materials and equipment for general uses. He will have developed a skill in using electrical prints, trouble-shooting, electrical controls and the repair of electrical and electronic equipment. He will have acquired a basic knowledge of business procedures and organization.

Within four to six years upon completion of this course and with dedication to one's work, he will become a highly skilled electrician craftsmen in his area.

### ELECTRICAL INSTALLATION AND MAINTENANCE CURRICULUM BY QUARTERS

Course Title		Class	Lab	Quarter Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education . . . . .	1	0	1
ELC 1112	Direct and Alternating Current . . . . .	4	12	8
ENG 1101	Reading Improvement . . . . .	2	0	2
MAT 1115	Electrical Math . . . . .	5	0	5
PSY 1101	Human Relations . . . . .	3	0	3
DFT 1110	Blueprint Reading: Building Trade . . . . .	0	3	1
		<hr/> 15	<hr/> 15	<hr/> 20
<b>SECOND QUARTER</b>				
ELC 1113	Alternating and Direct Current Machines and Controls . . . . .	5	14	10
ENG 1102	Communication Skills . . . . .	3	0	3
DFT 1113	Blueprint Reading: Electrical . . . . .	0	3	1
PHY 1101	Applied Science . . . . .	3	2	4
		<hr/> 11	<hr/> 19	<hr/> 18
<b>THIRD QUARTER</b>				
ELC 1124	Residential Wiring . . . . .	5	9	8
ELC 1125	Commercial and Industrial Wiring . . . . .	2	9	5
PHY 1102	Applied Science . . . . .	3	2	4
		<hr/> 10	<hr/> 20	<hr/> 17

#### FOURTH QUARTER

ELN 1118	Industrial Electronic Fundamentals .	4	8	7
ELN 1119	Industrial Electronic Controls .....	4	11	8
BUS 1103	Small Business Operations .....	3	0	3
		<u>11</u>	<u>19</u>	<u>18</u>

### FURNITURE PRODUCTION ASSISTANT (V 40)

#### (Diploma Program)

This curriculum was developed by the Furniture Industry Advisory Committee and this Institute with the primary purpose of better performance on the job. This would include people who have Furniture Production jobs, but want to improve themselves, and people without jobs who want to become qualified to obtain one.

Graduates of this curriculum will be awarded an appropriate diploma and may transfer credit into the degree program if they desire to do so. They may serve the industry as machine operations checker, stock control man, expeditor, sub-foreman, drafting, liaison man, production control clerk, section or group leader, supervisory trainee, project man, sample man, and bill out man.

### FURNITURE PRODUCTION ASSISTANT

#### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
GUI 101	Introduction to Education .....	1	0	1
T-DFT 101	Technical Drafting .....	2	5	4
T-FUR 104	Characteristics of Woods .....	2	0	2
T-FUR 108	Production Equipment I .....	4	0	4
T-PSY 206	Applied Psychology .....	3	0	3
BUS 111	Correcting and Reporting			
	Information .....	2	2	3
		<u>14</u>	<u>7</u>	<u>17</u>
<b>SECOND QUARTER</b>				
T-DFT 102	Technical Drafting .....	2	6	4
T-FUR 102	Construction and Billing I .....	1	3	2
T-FUR 109	Production Equipment II .....	4	0	4
T-FUR 106	Abrasive Material and Methods .....	2	2	3
		<u>9</u>	<u>11</u>	<u>13</u>

		Hours Class	Per Week Lab	Quarter Hours Credit
<b>THIRD QUARTER</b>				
T-FUR 112	Routing Scheduling and Processing ..	2	2	3
T-FUR 103	Construction and Billing II .....	1	3	2
T-ISC 203	Motion Study .....	3	2	4
T-DFT 103	Technical Drafting .....	2	5	4
		8	12	13

#### FOURTH QUARTER

T-ISC 202	Quality Control .....	3	0	3
T-FUR 107	Finishing Methods .....	2	2	3
T-ISC 103	Production Control .....	1	3	2
T-BUS 285	Cost Records and Estimation .....	2	0	2
T-BUS 111	Collecting and Reporting Information	2	2	3
T-ISC 207	Supervisory Responsibilities .....	3	0	3
		14	5	16

## PRACTICAL NURSING EDUCATION (V 38)

### Purpose of Curriculum

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand an increased number of well-trained personnel for health services. Realizing this need, the State Department of Community Colleges, in conjunction with local hospitals, administers programs of practical nurse education in local school systems, community colleges and technical institutes throughout the state.

The aim of the Practical Nurse Education Program is to make available to qualified persons the opportunity to prepare for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Students are selected on the basis of demonstrated aptitude for nursing as determined by pre-entrance tests, interviews with faculty members, high school record, character references, and reports of medical and dental examinations.

Throughout the one-year program, the student is expected to grow continuously in acquisition of knowledge and understandings related to nursing, the biological sciences, the social sciences, and in skills related to nursing practice, communications, interpersonal relations, and use of good judgment. Evaluation of student performance consists of tests on all phases of course content, evaluation of clinical performance, and evaluation of adjustment to the responsibilities of nursing. A passing score is required on all graded work, plus demonstrated progress in application of nursing skills to actual patient care.

### Job Description

Graduates of accredited programs of practical nurse education are eligible to take the licensing examination given by the North Carolina Board of Nursing. This examination is given three

times each year, usually in April, June, and October. A passing score entitles the individual to receive a license, and to use a legal title "Licensed Practical Nurse." The license must be renewed every two years.

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices, and, in some localities, public health facilities. In all situations, the LPN functions under supervision of a registered nurse and/or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situation requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understandings of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

## THE BANNER ELK PROGRAM OF PRACTICAL NURSE EDUCATION

Caldwell Community College operates an additional Practical Nurse Education Program at Banner Elk, North Carolina. The clinical practice for this program is held in the Charles A. Cannon Jr. Memorial Hospital, Banner Elk, North Carolina. The nursing students are provided free meals, rooms (Female students only), and health services by the hospital. Classes are held in the nurses' dormitory located on the Lees McRae College campus. The course of study is exactly as stated below.

### PRACTICAL NURSING CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
T-GUI 101	Introduction to Education .....	1	0	1
PSY 1101	Human Relations .....	3	0	3
NUR 1101	Basic Science .....	5	4	6
BUS 1134	Personal Development .....	3	0	3
NUR 1102	Introduction to Patient Care .....	6	6	8
MAT 1101N	Mathematics .....	3	0	3
		21	10	24

		Hours Class	Per Week Lab	Quarter Hours Credit
<b>SECOND QUARTER</b>				
NUR 1103	Medical-Surgical Nursing I .....	4	0	4
NUR 1104	Hospital Care of Patients* .....	0	24	8
NUR 1109	Maternal & Infant Care .....	4	0	4
NUR 1110	Care of Infants & Children .....	4	0	4
		12	24	20

### THIRD QUARTER

NUR 1105	Medical-Surgical Nursing II .....	9	0	9
NUR 1106	Hospital Care of Patients* .....	0	24	8
NUR 1111	Drug Administration .....	3	0	3

### FOURTH QUARTER

NUR 1107	Medical-Surgical Nursing III .....	12	0	12
NUR 1108	Hospital Care of Patients* .....	0	24	8
		12	24	20

\* This may be one or combination of clinical experiences in Obstetrical, Pediatric, or Medical-Surgical Nursing.

## OPERATING ROOM ASSISTANT (V73)

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter Hours Credit
Course Title		Class	Lab	
<b>FIRST QUARTER</b>				
SUR 1101	Principles of Operating Room Technique .....	9	6	12
SUR 1102	Anatomy and Physiology .....	6	4	8
SUR 1103	Microbiology .....	4	1	5
		19	11	25
<b>SECOND QUARTER</b>				
SUR 1104	Surgical Procedures .....	10	0	10
SUR 1105	Clinical Practice .....	0	20	10
		10	20	20

## TEXTILE PRODUCTION (V 47)

### Purpose of Curriculum

This program in Textile Production is designed to provide training for individuals employed or who are seeking employment in the textile industry. It is designed to provide the individual with the basic knowledge and skills necessary to enter into or to advance into the more responsible positions requiring leadership ability and a thorough knowledge of textile operations. Courses are included in this program to provide the individual with an understanding of the manufacturing process from the raw product to finished material. Courses such as Textile Fiber, Yarn Manufacturing, Weaving, Knitting, Fabric

Design and Analysis, and Textile Testing are designed with laboratories to provide experiences in the practical as well as the theoretical aspects of the industry. The program concludes with courses in Industrial Organizations, Supervisory Responsibility, Cost Records and Cost Estimates, Production Control, and Work Measurement to provide the individual with the background and knowledge for advancement into supervisory responsibilities.

The textile industry is North Carolina's leading employer. Its demand for trained personnel in the production phase has greatly increased over the past few years. Many job opportunities are available in responsible jobs in production and textile testing for the graduate of this program.

## TEXTILE PRODUCTION

### CURRICULUM BY QUARTERS

#### Part Time

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab	
FIRST QUARTER				
GUI 101	Introduction to Education .....	1	0	1
MAT 1101	Fundamentals of Mathematics .....	3	0	3
TEX 1104	Textile Fibers .....	2	2	3
		8	2	9
SECOND QUARTER				
TEX 1101	Yarn Manufacturing I .....	3	3	4
ISC 1001	Industrial Safety .....	3	0	3
ENG 1101	Reading Improvement .....	2	0	2
		8	3	9
THIRD QUARTER				
ENG 1102	Communication Skills .....	3	0	3
TEX 1108	Yarn Manufacturing II .....	5	6	7
		8	6	10
FOURTH QUARTER				
TEX 1110	Knitting .....	3	3	4
PHY 1101	Applied Science .....	3	2	4
		6	5	8
FIFTH QUARTER				
TEX 1106	Weaving .....	2	3	3
PHY 1102	Applied Science .....	3	2	4
		5	5	7
SIXTH QUARTER				
TEX 1120	Fabric Design and Analysis .....	3	3	4
PSY 1101	Human Relations .....	3	0	3
BUS 1105	Industrial Organization .....	3	0	3
		9	3	10

		Hours Class	Per Week Lab	Quarter Hours Credit
<b>SEVENTH QUARTER</b>				
TEX 1115	Textile Testing .....	3	3	4
ISC 1110	Production Control .....	3	2	4
		<hr/> 6	<hr/> 5	<hr/> 8
<b>EIGHTH QUARTER</b>				
ISC 1123	Work Measurement .....	3	2	4
ISC 1125	Supervisory Responsibility .....	3	0	3
ISC 1121	Cost Records and Cost Estimates ....	3	0	3
		<hr/> 9	<hr/> 2	<hr/> 10

## MACHINIST (V 32)

### Purpose of Curriculum

This curriculum was prepared to meet a definite need for training of machinists. Surveys show that many existing industries lack time and facilities for training enough machinists to meet present and future needs. Expanding industries located in our State and new industries invariably express the need for skilled craftsmen who have the background, knowledge, and potential to advance.

This program will give students the opportunity to acquire skills and related information necessary to gain employment in the machine shop industry.

### Job Description

The Machine Shop is the backbone of our present economy and requires a special skilled worker to perform the complex operations involved. The machinist is the skilled worker who shapes metal parts by using machine tools and proper total shop practice. His training and work experience enables him to plan and carry through the operations needed in turning out a machined product. A machinist is able to select the proper tools, materials, and methods required for each job and to plan the cutting and finishing operations called for on the blueprint or written instructions. He is able to make most standard shop computations related to tooling, feeds, speeds, and dimensions of the work. He is able to use precision measuring instruments such as micrometers, vernier calipers, vernier height gages, and indicators to maintain accuracies of his work to, sometimes, within thousandths of an inch.

The skilled worker must be able to set up and operate most types of machine tools such as drill presses, lathes, milling machines, boring machines, and grinders. In addition to most "standard" machines, he also spends time setting up and operating some more productive machines such as numerical tape controlled machines, turret lathes and automatic screw machines. He also becomes familiar with the composition of

metals so as to be able to select, heat treat and quench parts to improve their mechanical properties.

His wide knowledge enables him to turn a piece of metal into an intricate, precise final product.

**MACHINE SHOP**  
**CURRICULUM BY QUARTERS**

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
<b>FIRST QUARTER</b>				
GUI 101	Int. to Education .....	1	0	1
MEC 1101	Shop Processes .....	4	12	8
MAT 1101	Fund. of Math .....	3	0	3
DFT 1104	Blue Print Reading .....	0	3	1
WLD 1129	Welding .....	2	3	3
		6	2	7
<b>SECOND QUARTER</b>				
MEC 1102	Shop Processes .....	3	15	8
DFT 1105	Blueprint Reading & Sketching .....	0	3	1
MAT 1102	Algebra .....	5	0	5
ENG 1102	Comm. Skills .....	3	0	3
		11	18	17
<b>THIRD QUARTER</b>				
MEC 1103	Shop Processes .....	3	15	8
MAT 1104	Trigonometry .....	3	0	3
MEC 1115	Treatment of Ferrous .....	2	3	3
DFT 1106	Blueprint Reading & Sketching .....	0	3	1
		8	21	15
<b>FOURTH QUARTER</b>				
MEC 1104	Shop Processes .....	3	12	7
MEC 1116	Treatment of Non Ferrous Metals ...	2	3	3
MAT 1123	Math & Machinist .....	3	0	3
MEC 1122	Production Processes .....	4	3	5
		12	18	18

**UPHOLSTERING (V-82)**

Upholstering offers both men and women excellent employment opportunities in industry or operating their own business. It is among the most skilled and better paying occupations in the furniture industry. The primary emphasis in the following programs is upon actual practical experience in the springing up, covering, trimming, cutting, and sewing phases of upholstery. Emphasis throughout is placed upon quality and the development of production speed.

## UPHOLSTERY

### CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter Hours Credit
		Class	Lab	
FIRST QUARTER				
UPH 1111	Upholstery Materials and Methods I .	1	11	5
SECOND QUARTER				
UPH 1112	Upholstery Materials and Methods II .	1	11	5
THIRD QUARTER				
UPH 1113	Upholstery Materials and Methods III .....	1	11	5

## SEWING

### CURRICULUM BY QUARTERS

COURSE CATALOG - SEWING DEPARTMENT				Quarter
Course Title		Hours Per Week	Class	Hours Credit
FIRST QUARTER				
UPH 1114	Upholstery Sewing I . . . . .	1	11	5
SECOND QUARTER				
UPH 1115	Upholstery Sewing II . . . . .	1	11	5

## CUTTING

### CURRICULUM BY QUARTERS

Course Title		Hours Per Week		Quarter
		Class	Lab	Hours Credit
FIRST QUARTER				
UPH 1116	Upholstery Cutting I .....	1	11	5
SECOND QUARTER				
UPH 1117	Upholstery Cutting II .....	1	11	5

Note: A certificate will be awarded for the successful completion of each individual program.

A diploma will be awarded for the successful completion of the seven quarter program.

## WELDING (V 50)

### **Purpose of Curriculum**

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques and skills essential for successful employment in the welding field, and skills essential in metals industry.

### **Job Description**

The principal duty of the welder who uses manual techniques is to control the fusion of metals by directing the heat from

either an electric arc or gas welding torch and to add filler metal where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, mathematics, basic metallurgy, and blueprint reading.

A well-trained welder may find employment in many different industries. Shipbuilding, automotive, aircraft, guided missiles, railroad, tank construction, and pipe fitting industries are examples of manufacturing concerns which employ welders.

## WELDING

### CURRICULUM BY QUARTERS

		Hours Per Week		Quarter
Course Title		Class	Lab	Hours Credit
FIRST QUARTER				
T-GUI 101	Introduction to Education .....	1	0	1
WLD 1120	Oxyacetylene Welding and Cutting ..	3	13	7
MAT 1101	Fundamentals of Math .....	3	0	3
PSY 1101	Human Relations .....	3	0	3
ENG 1101	Reading Improvement .....	2	0	2
DFT 1104	Blueprint Reading: Mechanical .....	0	3	1
		12	16	17
SECOND QUARTER				
WLD 1121	Arc Welding .....	3	12	7
MAT 1103	Geometry .....	3	0	3
DFT 1117	Blueprint Reading: Welding .....	0	3	1
ENG 1102	Communication Skills .....	3	0	3
PHY 1101	Applied Science .....	3	2	4
		12	17	18
THIRD QUARTER				
WLD 1123	Inert Gas Welding .....	1	3	2
WLD 1124	Pipe Welding .....	3	12	7
PHY 1102	Applied Science .....	3	2	4
DFT 1118	Pattern Development and Sketching ..	0	3	1
WLD 1112	Mechanical Testing and Inspection ..	1	3	2
		8	23	16
FOURTH QUARTER				
WLD 1122	Commercial and Industrial Practices ..	3	9	6
WLD 1125	Certification Practices .....	3	6	5
MEC 1117	Structure of Metals .....	3	2	4
BUS 1105	Industrial Organization .....	3	0	3
		12	17	18

# Course Descriptions

## COURSE NUMBERING SYSTEM

- 1—All Freshman Technical Courses are indicated by a three-letter prefix preceded by the letter "T" and numbered between 100 and 200.
- 2—All Sophomore Technical Courses are indicated by a three-letter prefix preceded by the letter "T" and numbered between 200 and 300.
- 3—All Vocational Courses are indicated by a three-letter prefix and numbered between 1000 and 2000.
- 4—All College Transfer Courses are indicated by a three-letter prefix and numbered between 100 and 300.
- 5—All preparatory courses are indicated by a 3 letter prefix and number below 100.

### ART

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>ART 101 Art Appreciation</b>	3	0	3
An introduction to fundamental elements and principles of creative art expression emphasizing composition, design, shape, value, styles, and movements. Prerequisite: None.			

## AUDIO-VISUAL EQUIPMENT AND MATERIALS

<b>T-AUD 101 Audio-Visual Equipment and Materials</b>	2	2	3
An introduction to the use and care of a variety of audio-visual aids, and to acquire a basic knowledge of graphics. Emphasis is on the operation and maintenance of equipment and upon the production of slides, displays, and transparencies. Prerequisite: None.			

### AUTOMOTIVE

<b>PME 1101 Internal Combustion Engine</b>	3	12	7
Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing. Prerequisite: None.			

- PME 1102 Engine Electrical and Fuel Systems** 5 15 10  
 A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system. Prerequisite: PME 1101.
- PME 1103 Diesel Engine Servicing** 2 3 3  
 A study and practice in the servicing and repair of diesel engines and components. A study of fuels and special handling precautions, diesel engine principles, design, construction, reboring and installing of cylinder sleeves, and the operation of auxiliary engine controls. Prerequisite: PME 1102 or work experience.
- PME 1105 Diesel Engine Fuel Systems** 3 9 6  
 Fuel analysis, air induction, fuel systems with emphasis on pumps and injectors—their calibration and adjustments, combustion and precombustion chambers and exhaust systems. Prerequisite: PME 1101 and PME 1102 or work experience.
- PME 1106 Advanced Diesel Engine Servicing** 3 9 6  
 This course provides experience in the procedures to be followed for starting an engine, controlling the speed and load, checking the engine temperatures and pressures, and synchronizing diesel-electric sets. Included in this course are dynamometer tests to determine the operating characteristics of an engine, such as horsepower, torque, fuel consumption, and mechanical and thermal efficiencies. Test equipment used includes planimeters, pyrometers, cylinder indicators, compression and vacuum gages, gas analyzers, gage testers, and manometers. Prerequisite: PME 1103, PME 1105 or work experience.
- PME 1121 Braking Systems (Truck)** 2 3 3  
 A complete study of various braking systems used on automobiles and light trucks. Emphasis is placed on how they operate, the proper adjustment and repair. Prerequisite: None.
- PME 1126 Small Engine Repair** 2 3 3  
 The small engine repair is offered to train people in the maintenance and overhaul of the two and four cycle engines. Enrollees are taught to repair and replace defective parts of the small engines used to power boats, lawn mowers, garden tractors, chain saws, rototillers, and similar machines. Instruction in safety is one of the major responsibilities of the course. Prerequisite: PME 1101 or work experience.
- PME 1184 Co-op Summer Work (Min.)** 0 15 5  
 This is full-time or part-time pre-arranged on-the-job training. The student is placed in a garage to gain experience during the summer and by contract, verbal or written, returns to the institution for the fall term. He enrolls at the school and is supervised by his instructor. Prerequisite: Three or more quarters of instruction.
- PME 1202 Auto Electrical/Electronics** 4 9 7  
 A thorough study of the theory and operation of various automobile electrical units and systems. Maintenance and testing procedures, diagnosis and repair of all types of electrical/electronic components, especially the transistor circuits, found on the modern automobile. Prerequisite: PME 1102.
- PME 1203 Automotive Engine Tune-Up** 4 9 7  
 This course is designed to provide depth in the understanding and use of various types of tune-up equipment. Emphasis is placed on gaining knowledge of the waveforms of the oscilloscope and other units on the Tune-Up Tester. Through proper use of tune-up equipment, the student is expected to demonstrate his ability to diagnose malfunctions in ignition systems, cranking motors and charging circuits. Prerequisite: PME 1102; DFT 1102.

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>PME 1214 Advanced Air Conditioning Repair</b>	3	3	4
In depth study of the principles of refrigeration; extensive practice in disassembly and the assembly of the component parts; diagnosis of malfunctioning; the proper methods of repair and handling of refrigerants in charging the various systems. Prerequisite: AHR 1101 or work experience.			
<b>PME 1221 Front Suspension, Alignment and Power Steering</b>	1	3	2
Theory of operation, correct disassembly and mounting of all front suspension parts on various types of frames (car and light truck). A thorough understanding of the function and repair of steering gears (Power and standard), shock absorbers, springs, wheels and tires, pumps, rams, etc. is gained. Theory and application of steering geometry, correct diagnosis of problems and use of the alignment and balancing machines; analysis and correction of tire wearing problems, vibrations, hard steering, pulling, etc. is experienced. Prerequisite: AUT 1123.			
<b>PME 1224 Advanced Automatic Transmissions</b>	3	12	7
This course is designed to provide a measure of depth in the understanding of automatic transmissions. Instruction includes classroom study, demonstrations, and student participation in disassembly, reassembly, and testing of selected transmissions. Special emphasis is placed on principles, function, construction, operation, servicing and "trouble-shooting" procedures and repair of various types of automatic transmissions. Prerequisite: PME 1124.			
<b>PME 1225 Auto Engine Trouble Shooting</b>	2	9	5
In this course, the general principles of engine "trouble-shooting" including the electrical and fuel systems are gained. In addition, a study is made of the engine design and construction along with the four-stroke cycle and the two-stroke cycle principles of engine operation. The details of the engine lubrication, maintenance, and operation of cooling systems are stressed. Prerequisite: PME 1101 or work experience.			
<b>PME 1226 Automobile Servicing II</b>	2	9	5
Emphasis is placed on "trouble-shooting" and repairing the various component systems on vehicles provided for general repairs. The student is given in depth experiences in diagnosis, testing, adjusting, repairing, and replacing components parts. Prerequisite: AUT 1125.			
<b>PME 1227 Power Accessories</b>	5	0	5
This course is designed to acquaint the student with the operation, service, and repair of power operated seats, windows, tops, windshield wipers, radio antennas; etc. It should insure the development of the student's ability to understand and trace out the circuits of the electrical accessories, to enhance his skill in diagnosing troubles and repairing damaged circuits. He will apply his knowledge in drawing and reading schematic diagrams of electrical circuits. Prerequisite: PME 1202 or work experience.			
<b>AHR 1101 Automotive Air Conditioning</b>	2	2	4
General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system. Use of testing equipment in diagnosing trouble, conducting efficiency tests and general maintenance work. Prerequisite: PHY 1101.			
<b>AUT 1123 Brakes, Chassis and Suspension Systems</b>	3	12	7
A complete study of various braking systems employed on automobiles and light weight trucks. Emphasis is placed on how they operate, proper adjustment and repair. Also, the servicing of parking brakes is emphasized. Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension systems. Prerequisite: None.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>AUT 1124 Automotive Power Train Systems</b>	3	12	7
Principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair. Prerequisite: AUT 1123.			

<b>AUT 1125 Auto Servicing I</b>	3	9	6
Emphasis is on the shop procedures necessary in "trouble-shooting" the various component systems of the automobile. "Trouble-shooting" of automotive systems, provides a full range of experiences in testing, adjusting, repairing and replacing components. A close simulation to an actual automotive shop situation will be maintained. Prerequisite: PME 1102, AUT 1123, AHR 1101.			

## BIOLOGY

<b>T-BIO 101 Biological Science</b>	3	0	3
A general outline of the fundamentals of biological science with special emphasis on those concepts and skills which pertain to the structure and function of living things. Prerequisite: None.			

<b>BIO 101 General Biology</b>	3	3	4
An introduction to the biological concepts; a study of the chemical and physical of the living cell. Various animal groups are studied from the point of view of structure, function, and habitat. Prerequisite: None.			

<b>BIO 102 General Biology</b>	3	3	4
A continuation of BIO 101, including a study of various plant groups approached from the point of view of structure, function, and habitat. Prerequisite: BIO 101 or instructor approval.			

<b>BIO 103 General Biology</b>	3	3	4
A continuation of the anatomy and physiology of the human body, genetics, and evolution. Prerequisite: BIO 102 or instructor approval.			

<b>BIO 201 Botany I</b>	3	2	4
The morphology, physiology, reproduction and ecological relationships of non-seed producing plants. Prerequisite: BIO 103.			

<b>BIO 202 Botany II</b>	3	2	4
The morphology, physiology, reproduction and ecological relationships of seed producing plants. Prerequisite: BIO 103.			

<b>BIO 206 Invertebrate Zoology</b>	3	2	4
A study of the structure, physiology, and taxonomy of the invertebrates. Prerequisite: Biology 103.			

<b>BIO 207 Vertebrate Zoology</b>	3	2	4
A systematic survey of the major groups of vertebrate animals. Prerequisite: BIO. 103.			

## BUSINESS EDUCATION

<b>BUS 101 Introduction to Business</b>	5	0	5
A survey of the types of business organizations with emphasis on financing, marketing, business law, and internal control and management.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>BUS 102 Typewriting</b>	2	3	3
Emphasis on the study of keyboard, the mechanics necessary for acquisition of typewriting skills, and development of speed and accuracy.			
<b>BUS 103 Typewriting</b>	2	3	3
Emphasis on improvement of typewriting skills, manuscripts, business letters, tabulations, and increased speed and accuracy. Prerequisite: BUS 102 or approval of instructor.			
<b>BUS 104 Typewriting</b>	2	3	3
Emphasis on production typing, preparation of budgets, business letters, and various business and legal forms. Prerequisite: BUS 103, or the equivalent.			
<b>BUS 106 Shorthand</b>	2	3	3
Principles of Gregg shorthand. Presentation of theory with extensive practice in reading and writing.			
<b>BUS 107 Shorthand</b>	2	3	3
A review of fundamental principles, with additional emphasis on speed, accuracy, fluency, and vocabulary. Also an introduction to transcription. Prerequisite: BUS 106 or the equivalent.			
<b>BUS 108 Shorthand</b>	2	3	3
Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Prerequisite: BUS 107.			
<b>T-BUS 110 Office Machines</b>	2	2	3
A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator. Prerequisite: None.			
<b>T-BUS 111 Collecting and Reporting Information</b>	2	2	3
Designed to aid the student in the methods of collecting various types of data needed in the furniture industry for better cost estimates and analysis. Emphasis will be placed on accurate methods of collecting and presenting data in an effective method. Prerequisite: None.			
<b>BUS 112 Personal Finance</b>	3	0	3
Covers personal and family finance, budgeting, saving, insurance, real estate, stock market and other investment media.			
<b>BUS 115 Business Law</b>	3	0	3
A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies. Prerequisite: None.			
<b>BUS 116 Business Law</b>	3	0	3
Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights. Prerequisite: BUS 115.			
<b>BUS 120 Principles of Accounting</b>	3	1	3
Methods of modern accounting practice, theory of accounting as a management information system, study of the accounting cycle and presentation of financial statements, methods and practices applicable to formal organizations.			
<b>T-BUS 120 Accounting</b>	5	2	6
Principles, techniques, and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: T-MAT 110 or T-MAT 101.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>BUS 121 Principles of Accounting</b>	3	1	3
Continuation of the study of accounting principles and practices, emphasis on managerial accounting tools for decision making. Prerequisite: BUS 120.			
<b>T-BUS 121 Accounting</b>	5	2	6
Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on recording, summarizing, and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: T-BUS 120.			
<b>BUS 122 Principles of Accounting</b>	3	1	3
A critical examination and analysis of accounting principles, determination of cost and income, valuation and statement presentation, current problems presented in accounting literature and business cases. Prerequisite: BUS 121.			
<b>BUS 123 Business Finance</b>	3	0	3
Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing. Prerequisite: None.			
<b>BUS 124 Business Finance</b>	3	0	3
Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. Prerequisite: BUS 123.			
<b>T-BUS 134 Personal Development</b>	3	0	3
Designed to help the student recognize the importance of physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on poise, grooming, and method of personal development. Prerequisite: None.			
<b>T-BUS 183M Terminology and Vocabulary</b>	3	0	3
To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices. Prerequisite: BUS 107. (T-BUS 183E—Elective for Executive Secretary)			
<b>BUS 205 Advanced Typewriting</b>	2	3	3
Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents. Prerequisite: BUS 104. Speed requirement, 50 words per minute for five minutes.			
<b>T-BUS 206E Dictation and Transcription</b>	3	2	4
Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material. Prerequisite: BUS 108.			
<b>T-BUS 206M Dictation and Transcription (Medical) (4)</b>	3	2	4
Develops the skills of taking dictation and transcribing materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Prerequisite: BUS 108.			
<b>T-BUS 207E Dictation and Transcription</b>	3	2	4
Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new material. Prerequisite: T-BUS 206E.			

	Hours Per Class	Week Lab	Quarter Hours Credit
<b>T-BUS 207M Dictation and Transcription</b> (Medical) (4)	3	2	4
Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business, technical, and professional offices. Prerequisite: T-BUS 206M.			
<b>T-BUS 208E Dictation and Transcription</b>	3	2	4
Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new materials. Prerequisite: T-BUS 207E.			
<b>T-BUS 208M Dictation and Transcription</b> (Medical) (4)	3	2	4
Principally a speed-building course, covering materials appropriate to the course of study, with emphasis on neatness as well as accuracy. Prerequisite: T-BUS 207M.			
<b>T-BUS 211 Office Machines</b>	2	2	3
Instruction in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines. Prerequisite: T-BUS 110.			
<b>T-BUS 213 Office Practice</b>	3	2	4
Designed to acquaint the student with the responsibilities encountered in a general office. Emphasis on improving work habits and procedures, and developing skills and knowledge in the general clerical field. Prerequisite: None.			
<b>T-BUS 214 Secretarial Procedures</b>	3	2	4
Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, basic rules of filing, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims. Prerequisite: None.			
<b>T-BUS 215M Office Application</b>	6	0	6
During the sixth quarter only, students are assigned to work in a business, technical or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study. Prerequisite: T-BUS 214, BUS 205, T-BUS 208, T-BUS 211.			
<b>T-BUS 215E Office Application</b>	6	0	6
During the sixth quarter only, students are assigned to work in a business, technical or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study. Prerequisite: T-BUS 214, BUS 205, T-BUS 208, T-BUS 211.			
<b>BUS 217 Business Law</b>	3	0	3
A study of the powers, policies, methods, and procedures used by the various federal, state and local administrative agencies in promoting and regulating business enterprises. It includes a consideration of the constitutional and statutory limitations on these bodies and judicial review of administrative action. Prerequisite: BUS 116.			
<b>T-BUS 219 Credit Procedures and Problems</b>	3	0	3
Principles and practices in the extension of credit: collection procedures; laws pertaining to credit extension and collection are included. Prerequisite: T-BUS 120.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-BUS 225 Cost Accounting</b>	3	2	4
A detailed study of systems of cost accounting including process, job orders and standard costs. Usefulness of data to management is stressed. Prerequisite: T-BUS 121.			
<b>T-BUS 229 Taxes</b>	3	2	4
Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: Income, payroll, intangible, capital gain, sales and use, excise, and inheritance. Prerequisite: T-BUS 121.			
<b>T-BUS 232 Sales Development</b>	3	0	3
A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required. Prerequisite: None.			
<b>T-BUS 233 Personnel Management</b>	3	0	3
Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, renumeration, labor relations, fringe benefits and security. Prerequisite: None.			
<b>T-BUS 235 Business Management</b>	3	0	3
Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing and financing. Clarification of the decision-making function versus the operating function. Role of management in business-qualifications and requirements. Prerequisite: None.			
<b>T-BUS 237 Wholesaling</b>	3	0	3
The development of wholesaling; present day trends in the United States. A study of the functions of wholesaling. Prerequisite: None			
<b>T-BUS 239 Marketing</b>	5	0	5
A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process. Prerequisite: None.			
<b>T-BUS 241 Sales Promotion Management</b>	3	0	3
Telescope and activities of sales promotion with emphasis on the coordination of advertising, display, special events, and publicity, external and internal methods of promoting business budgeting, planning, and implementing the plan. Prerequisites: T-BUS 232, T-BUS 233.			
<b>T-BUS 243 Advertising</b>	3	2	4
The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media. Prerequisite: None.			
<b>T-BUS 245 Retailing</b>	3	0	3
A study of the role of retailing in the economy, including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends. Prerequisite: None.			
<b>T-BUS 247 Business Insurance</b>	3	0	3
A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included. Prerequisite: None.			
<b>T-BUS 255 Interpreting Accounting Records</b>	3	0	3
Designed to aid the student in developing a "use understanding" of accounting records, reports and financial statements. Interpretation, analysis, and utilization of accounting statements. Prerequisite: T-BUS 121.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-BUS 266 Budget and Record Keeping</b>	3	0	3
The basic principles, methods, and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record keeping in order to evaluate the effectiveness of budget planning. Prerequisite: T-BUS 121.			
<b>T-BUS 271 Office Management</b>	3	0	3
Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems. Prerequisite: None.			
<b>T-BUS 272 Principles of Supervision</b>	3	0	3
Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed. Prerequisite: None.			
<b>T-BUS 284M Terminology and Vocabulary</b> (Medical) (3)	3	0	3
Greater emphasis on an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in a professional office. Prerequisite: T-BUS 183M.			
<b>T-BUS 285 Cost Records and Estimates</b>	2	0	2
Cost estimation, equipment, materials and labor take off, overhead cost. The advantages and limitations of prorating items of cost will be considered. Prerequisite: MATH 110 or Consent of Advisor.			
<b>BUS 1101 Cost Records and Cost Estimates</b>	2	0	2
Estimate of cost (materials, labor, overhead, etc.). Materials cost deals with price and grade, cost of delivery and storage, and percent utilization. Labor cost studies deal with such factors as time required, hourly rate, quantities produced, turnover and cost of training. Overhead costs are studied over specific periods of time with advantages and limitations of prorating overhead items of cost. Prerequisite: None.			
<b>BUS 1103 Small Business Operations</b>	3	0	3
An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations. Prerequisite: None.			
<b>BUS 1105 Industrial Organizations</b>	3	0	3
Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost. Prerequisite: None.			
<b>BUS 1111 Collecting &amp; Reporting Information</b>	2	2	3
This course deals with the development of methods of collecting different types of data and information needed in the furniture industry for better production control, cost estimates, and cost analysis. Emphasis will be given to accurate collections of data and methods of presenting it neatly and effectively. Prerequisite: None.			
<b>BUS 1134 Personal Development</b>	3	0	3
Designed to teach the student the importance of good personality, to develop the type of personality that will assist in job success. Emphasis is placed on the principles of grooming in the areas of dress, make-up, hygiene and health. Prerequisite: None.			

## CARPENTRY

<b>CAR 1101 Carpentry</b>	<b>3</b>	<b>15</b>	<b>8</b>
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A brief history of carpentry and present trends of the construction industry. The course will involve operation, care, and safe use of carpenters hand tools and power tools in cutting, shaping and joining construction materials used by the carpenter. Major topics of study will include theoretical and practical applications involving materials and methods of construction; building layout; preparation of site; footings and foundation wall construction including form construction and erection. Prerequisite: None.

<b>CAR 1102 Carpentry: Millwork and Cabinetmaking</b>	<b>3</b>	<b>15</b>	<b>8</b>
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Cabinet making and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment will be emphasized in learning methods of construction of millwork and cabinetry. Practical applications will include measuring, layout and construction of: base and wall cabinets, built-in desk, door and window frames; stairs; and interior and exterior cornice and trim. Materials and finishes will also be studied. Prerequisites: CAR 1101, CAR 1110.

<b>CAR 1103 Carpentry: Framing</b>	<b>3</b>	<b>15</b>	<b>8</b>
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Instruction is given in the principles and practices of frame construction beginning with the foundation sills and including: floor joist; subfloor; wall studs; ceiling joist, rafters, bridging, bracing, sheathing, and interior wall partition. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction, truss construction, and post and beam construction. Application and selection of sheathing and roofing is included. Consideration is given to the coordination of carpentry work with installation of the mechanical equipment such as: electrical, air conditioning, heating, and plumbing. Prerequisites: Car 1101, DFT 1111.

<b>CAR 1104 Carpentry: Finishing</b>	<b>3</b>	<b>18</b>	<b>9</b>
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Exterior and interior trim and finish carpentry will complete the general carpentry program. Included will be materials and methods used in finishing carpentry such as: exterior cornice, door and window trim; interior flooring, door and window facing, moldings, and cornice construction; installation of hardware, and installation of built-in equipment and cabinets. Prerequisites: CAR 1103, DFT 1111.

<b>CAR 1113 Carpentry: Estimating</b>	<b>3</b>	<b>3</b>	<b>4</b>
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This is a practical course in quantity "takeoff" from prints of jobs performed by the carpenter. Figuring the quantities of materials needed and costs of building various components and structures. Prerequisites: DFT 1111, MAT 1112.

<b>CAR 1114 Building Codes</b>	<b>3</b>	<b>0</b>	<b>3</b>
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A study is made of building codes and the minimum requirements for local, county, and state construction regulations. This involves safety, sanitation, mechanical equipment and materials. Also, a review will be made of the minimum property requirements of the Federal Housing Administration and the North Carolina State Code. Prerequisite: CAR 1103. Co-requisite: CAR 1104.

## CHEMISTRY

<b>CHM 101 General Chemistry I</b>	<b>3</b>	<b>3</b>	<b>4</b>
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Language of Chemistry; atomic theory and structure; non-metals and their compounds; gas laws; chemical changes; oxidation-reduction and acid base chemical equilibrium. Prerequisite: None.

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>CHM 102 General Chemistry II</b>	3	3	4
Continuation of CHM 111. Solution chemistry; metals and their compounds, including semimicro qualitative analysis; introduction to basic organic chemistry. Prerequisite: CHM 111.			
<b>CHM 103 General Chemistry III</b>	3	3	4
Continuation of CHM 112. Coordination chemistry; electro-chemistry; kinetics; thermochemistry; chemical thermodynamics; nuclear chemistry. Prerequisite: CHM 112.			
<b>CHM 201 Qualitative Analysis</b>	3	6	5
A continuation of Chemistry 103. A study of selected elements and their compounds using a systematic scheme for the separation and identification of cations and anions and involving descriptive chemistry and chemical equilibrium. Prerequisite CHM 103.			
<b>CHM 210 Organic Chemistry</b>	3	3	4
Basic facts, theory, techniques, and important applications of reactions of aliphatic and aromatic compounds and natural products. Properties, preparations, separation, and identification of various types of organic compounds. Prerequisite: CHM 103.			
<b>CHM 211 Organic Chemistry</b>	3	3	4
A continuation of CHM 210. Prerequisite: CHM 210.			
<b>CHM 212 Organic Chemistry</b>	3	3	4
A continuation of CHM 211. Prerequisite: CHM 211.			

## COSMETOLOGY

<b>COS 1101 Introduction to Cosmetology</b>	3	1	4
Designed to give the student a background for the profession and an understanding of the laws and civic responsibilities involved.			
<b>COS 1102 Diagnosis, Prevention and Treatment of Disorders I</b>	3	2	4
A study of bacteriology to prevent spread of disease, including instruction in sanitary measure and laws. A study of the techniques used in giving scalp treatments as well as the identification of skin, nail and hair disorders.			
<b>COS 1103 Bacteriology, Sanitation and First Aid</b>	2	1	2
A further study of bacteriology and sanitation needed to prevent the spread of disease in shops. Emphasis is placed on safety and methods of rendering first aid. Instruction in health needs and habits of an individual is included.			
<b>COS 1104 Diagnosis and Treatment of Disorders II</b>	3	2	4
A study of the principles, materials, supplies and applications used in giving scalp treatments including the cause and treatment of common skin and scalp disorders.			
<b>COS 1105 Shampoo, Styling and Shaping Techniques I</b>	2	11	6
This course includes the theory necessary to develop the skill of shampooing, including study of hair, use of comb, fingers, and waving lotion to produce a wave. Skill in the use of scissors and razor for shaping the hair is developed. Fundamental principles of hair styling and wig care is introduced.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>COS 1106 Shampoo, Styling, and Shaping Techniques IX</b>	2	11	6
This course includes practical training necessary to develop skill in shampooing with emphasis placed on application and various rinses. Different styles of finger waving, pin curling, and roller curl are studied and practiced. Various methods of cutting hair are introduced as to various hair styling and wig care.			
<b>COS 1107 Chemistry, Hair Coloring &amp; Permanent Waving I</b>	2	6	4
Designed to provide a foundation for the practical art of permanent waving including an introduction to the methods of permanent waving. Techniques and applications of hair tints and bleaches are introduced. Basic chemistry as it applies to the reaction of chemicals to certain textures of hair is included.			
<b>COS 1108 Chemistry, Hair Coloring &amp; Permanent Waving II</b>	1	8	4
Types of permanent waves, texture and elasticity of hair are included. The composition, merits and limitations of softeners and developers are introduced. Areas of chemistry pertaining to creams and lotions, facial preparation and hair preparations are studied.			
<b>COS 1109 Chemistry, Hair Coloring &amp; Permanent Waving III</b>	3	14	8
Various types of permanent waves are put into practice. Applications of hair tints and bleaches are applied to certain textures of hair.			
<b>COS 1110 Manicuring</b>	1	2	2
The care of the hands and nails with emphasis on correct procedures, techniques, materials and equipment used in giving a manicure. Also attention devoted to developing an understanding of the relationship between customer and operator.			
<b>COS 1111 Hair Styling and Wig Care</b>	1	3	2
An extensive practice in the proper use of various curls, brushing and combing.			
<b>COS 1112 Hairstyling and Shampooing I</b>	1	2	2
The student learns to design various hair styles which are agreeable with features of individuals.			
<b>COS 1113 Hairstyling and Shampooing II</b>	4	17	10
A continuation of hairstyling with emphasis on roller placement, pin curl placement and directional waving for design. Also extensive practice on live models under shop conditions.			
<b>COS 1118 Anatomy I</b>	1	0	1
The structure and function of bones, muscle, and nerves with emphasis upon their application to the field of cosmetology.			
<b>COS 1119 Anatomy II</b>	1	0	1
A continuation of anatomy with emphasis placed on the structure and function of bones, muscle and nerves as needed to give massages of hands, arms, face, and scalp.			
<b>COS 1120 Facials</b>	1	3	2
Designed to aid in the undertaking of the principles, techniques, purpose, application and benefits of facial massage and cosmetic use. The various types of facials appropriate for different types of skin studied.			

## DATA PROCESSING

<b>T-EDP 100 Introduction to Computer Concepts</b>	3	0	3
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An introductory course in computers for the student who plans to pursue the degree in data processing as well as the student who desires a general non-technical knowledge of terminology and concepts. No previous knowledge or experience in data processing is required. Prerequisite: None.

<b>T-EDP 101 Functional Wiring Principles</b>	2	2	3
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A study of unit record procedures and operating practices. Student laboratory work emphasizes concepts of punched card data processing equipment. Prerequisite: None.

<b>T-EDP 104 Introduction to Data Processing System</b>	3	2	4
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Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses. Prerequisite: None.

<b>T-EDP 106 Compiler Language I</b>	2	2	3
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A fundamental course in FORTRAN or PL/1 programming. The FORTRAN or PL/1 language structure, statements, and programming methods and techniques are studied. The student will develop program logic and write FORTRAN or PL/1 programs for solving sample problems. Prerequisite: None.

<b>T-EDP 108 Assembly Language</b>	2	4	4
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The study of symbolic computer languages with emphasis on a particular example of such a language. The student will develop program logic and write programs using assembly language to solve appropriate assigned problems. Prerequisite: None.

<b>T-EDP 202 Compiler Language II</b>	2	4	4
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This course is designed to provide basic training in COBOL programming. The COBOL language structure, statements, and programming methods and techniques are studied. The student will develop program logic and write COBOL programs for solving sample problems. Prerequisite: T-EDP 106.

<b>T-EDP 204 Statistical Programming</b>	2	4	4
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A study of FORTRAN programming as applied to solution of statistical problems. The student will analyze statistical problems and develop the programs and/or use library programs for computer solution. Prerequisite: MAT 110 or approval of Department.

<b>T-EDP 208 Programming Applications I</b>	2	4	4
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This course is designed to provide the student with sufficient knowledge in computer methodology to permit the use of computers in business. Emphasis will center around the computer environment with an in-depth study of the integration of the computer within business and industry. Prerequisite: T-EDP 202.

<b>T-EDP 209 Programming Applications II</b>	2	4	4
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This course emphasizes the preparation and utilization of operations-data used in a typical business; case problems involving systems established for collecting the data, and generating information for organizational units are studied. Audit trails enabling the tracing of transactions back to the original source or forward to the first report are analyzed. Simulated data is used to demonstrate programming techniques (using COBOL) required in processing management information. Statistical analysis programming using a scientific language (FORTRAN) is studied as an aid to business decision making. Prerequisite: T-EDP 208.

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-EDP 210 Linear Programming</b>	3	2	4
Mathematical models effective in management planning, scheduling and control are studied. The student investigates problems applicable to linear programming models, critical path, simulation, and queuing theory. The computer will be used for problem solution using available library programs. Prerequisite: Approval of Department.			
<b>T-EDP 214 Computer Systems I</b>	2	2	3
A study of computer systems involving such concepts of architecture and/or programming as channels, interrupts, multiprogramming, job scheduling, file devices, and file organization. Prerequisite: T-EDP 202.			
<b>T-EDP 215 Computer Systems II</b>	2	2	3
A study of computer systems involving such concepts of architecture and/or programming for operating systems, job control language, resident packs, teleprocessing, and programming language survey.			
<b>T-EDP 217 Data Processing Project</b>	1	8	5
The student devotes a quarter to the solution of a practical case study with minimum supervision. Prerequisite: T-EDP 209, T-EDP 215.			
<b>T-EDP 219 Systems and Procedures</b>	3	0	3
An introductory course in the principles of management systems applied to information data flows. Particular attention is given to forms flowcharting, forms analysis and design and systems analysis. Prerequisites: Approval of Department or T-EDP 100.			
<b>T-EDP 220 Applied Business Systems</b>	3	0	3
A continuation of management systems applied to information data-flow. Practical work in systems flow-charting and analysis is implemented. The conduction of feasibility studies, the preparation and maintenance of standard practice, policies and organization manuals, and computer applications are stressed. Prerequisite: T-EDP 219.			
<b>T-EDP 221 Computer Language Survey</b>	2	2	3
A survey and comparison of various computer languages. Students will write and execute basic programs in several computer languages. Prerequisite: Approval of Department.			
<b>T-EDP 222 User Programs</b>	2	2	3
A study of the documentation, applications, and use of various user-supplied programs. Prerequisite: Approval of Department.			

## DRAFTING

<b>T-DFT 101 Technical Drafting</b>	2	6	4
The field of drafting is introduced as the student begins study of drawing principles and practices of print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced. Prerequisite: None.			
<b>T-DFT 102 Technical Drafting</b>	2	6	4
The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphical analysis of space problems.			

	Hours Class	Per Week Lab	Quarter Hours Credit
Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices for "details" and "working drawings," approved by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometrical objects. Prerequisite: T-DFT 101.			
<b>T-DFT 103 Technical Drafting</b>	2	6	4
Intersection and developments and their practical solutions. Where applicable, model solutions accompany the problems. The various techniques employed to produce and render isometric and oblique drawings, isometric, dimetric and trimetric projections, will be included. Prerequisite: T-DFT 102.			
<b>T-DFT 201 Technical Drafting</b>	2	6	4
Applications and constructions of charts, graphs, and nomographs in engineering and technical data. Screw threads, springs, keys, rivets, piping, and welding symbols, methods of representing and specifying will be covered. Basic mechanisms of motion transfer, gears and cams, will be studied and drawn with emphasis on methods of specifying, calculating, dimensions, and delineating. Prerequisite: T-DFT 103.			
<b>T-DFT 204 Descriptive Geometry</b>	2	4	4
Graphic analysis of space problems involving points, lines, planes, connectors, and a combination of these. Practical design problems will be stressed with analytical verification where applicable. Visualization shall be stressed on every problem. Prerequisites: T-DFT 102, T-MAT 102.			
<b>T-DFT 205 Design Drafting I</b>	2	6	4
Basic design is introduced in the study of motion transfer mechanisms as they relate to power trains. Principles of design sketching, design drawing, layout drafting, detailing from layouts, production drawings and simplified drafting practices constitute areas of study. Types of methods of specifying materials and workmanship are an integral part of the course. Prerequisites: T-DFT 204, T-MAT 102, T-PHY 102.			
<b>T-DFT 206 Design Drafting II</b>	2	6	4
Research to solve a problem in design by consulting various manuals, periodicals, and through laboratory experiments. A written technical report, preliminary design sketches, layout drawings, detail drawings, assembly and sub-assembly drawings, pictorial drawings, exploded pictorial assembly, patent drawings and specifications are required as a part of the problem. Prerequisites: T-DFT 205, T-DFT 210.			
<b>T-DFT 211 Mechanisms</b>	3	2	4
Mathematical and drafting room solutions of problems involving the principles of machine elements. Study of motions of linkages, velocities and acceleration of points within a link mechanism; layout methods for designing cam, belts, pulleys, gears and gear trains. Prerequisites: T-DFT 201 and 204, T-MAT 103, T-PHY 106.			
<b>T-DFT 212 Jig and Fixture Design</b>	2	6	4
Commercial standards, principles, practices and tools of jig and fixture design. Individual project and design work to acquaint students with the types of jigs and fixtures and their design. Prerequisites: T-DFT 205, T-DFT 211.			
<b>DFT 1101 Schematics &amp; Diagrams: Power Mechanics</b>	0	3	1
Interpretation and reading of blueprints. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes. Prerequisite: None.			
<b>DFT 1102 Schematics and Diagrams: Power Mechanics</b> (Electrical and Fuel Systems)	1	3	2
Interpretation and reading of schematic prints and diagrams. Making sketches of electrical wiring and fuel system components for automotive			

	Hours Class	Per Week Lab	Quarter Hours Credit
engines and other internal combustion engines. Learning to identify the various components of the systems by sketching and labeling parts. Practice in tracing wiring systems and diagnosing trouble by using schematics and diagrams found in the automotive service manuals. Prerequisite: DFT 1101.			
<b>DFT 1103 Schematics and Diagrams: Power Mechanics 0 3 1</b> (Chassis and Braking Systems)			
Interpretation of prints, schematics and diagrams pertaining to automotive chassis and braking systems. A study of components that make up the front suspension, differential assembly and brake assemblies. Prerequisite: DFT 1101, DFT 1102.			
<b>DFT 1104 Blueprint Reading: Mechanical 0 3 1</b>			
Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, dimensioning procedures and notes. Prerequisite: None.			
<b>DFT 1105 Blueprint Reading: Mechanical 0 3 1</b>			
Further practice in interpretation of blueprints as they are used in Industry; study of prints supplied by industry; making plans of operations; introduction to drafting room procedures; sketching as a means of passing on ideas, information and processes. Prerequisite: DFT 1104.			
<b>DFT 1106 Blueprint Reading: Mechanical 0 3 1</b>			
Advanced blueprint reading and sketching as related to detail and assembly drawings used in machine shops. The interpretation of drawings of complex parts and mechanisms for features of fabrications, construction and assembly. Prerequisite: DFT 1105.			
<b>DFT 1110 Blueprint Reading: Building Trade 0 3 1</b>			
Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.			
<b>DFT 1111 Blueprint Reading &amp; Sketching 0 3 1</b>			
Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevations, chimneys, fireplaces, arches and cavity wall construction. Development of proficiency in making three view and pictorial sketches. Prerequisite: DFT 1110.			
<b>DFT 1112 Blueprint Reading &amp; Sketching 0 3 1</b>			
Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings will be studied with emphasis on the plot plan, basement and/or foundation plan, walls and various detailed drawings of masonry work. Prerequisite: DFT 1111.			
<b>DFT 1113 Blueprint Readings: Electrical 0 3 1</b>			
Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course. Prerequisite: DFT 1110.			
<b>DFT 1117 Blueprint Reading: Welding 1 3 2</b>			
A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications. Prerequisite: DFT 1104.			
<b>DFT 1118 Pattern Development and Sketching 0 3 1</b>			
Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates. Prerequisite: DFT 1104.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>DFT 1121 Drafting</b>	3	12	7
An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-stroke lettering, applied geometry, freehand sketching consisting of orthographical drawings. Orthographic projection, reading and instrument drawing of principal views. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time. Prerequisite: None.			
<b>DFT 1121-1 Drafting (Part Time)</b>	2	5	4
An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-stroke lettering, applied geometry, freehand sketching consisting of orthographic drawings. Orthographic projection, reading and instrument drawing of principal views will be emphasized. Dimensioning and note practice will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time. Prerequisite: None.			
<b>DFT 1121-2 Drafting (Part Time)</b>	2	6	4
Continuation of Drafting 1121-1.			
<b>DFT 1122 Drafting</b>	3	8	6
The trainee will study simple and successive revolutions and their applications to practical problems. Sections and conventions will be studied and both detail and assembly sections will be drawn. Intersections and developments will be studied by relating the drawing to the sheet metal trades. Models of the assigned drawings will be made from construction paper, cardboard, or similar materials as a proof of the solution to the problems drawn. Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced and dimensioning and sectioning of oblique and axonometric pictorials will be done. Prerequisite: DFT 1121.			
<b>DFT 1125 Descriptive Geometry</b>	2	3	3
Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Prerequisite: DFT 1121.			
<b>DFT 1130 Drafting (Sketching)</b>	2	5	4
<b>DFT 1131 Mechanical Drafting</b>	3	9	6
An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasteners: keys, rivets, springs, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with the study of basic mechanisms of motion transfer; gears, cams, power trains, pulleys, belting and methods of specifying and calculating dimensions will be studied. Drawings will be made involving these mechanisms. Prerequisite: DFT 1122.			
<b>DFT 1131-1 Mechanical Drafting (Part Time)</b>	2	6	4
<b>DFT 1131-2 Mechanical Drafting (Part Time)</b>	2	6	4
<b>DFT 1132 Mechanical Drafting</b>	3	12	7
Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list, and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a tool, jig, fixture or simple machine and learn principles of design, handbook and manual usage. Prerequisite: DFT 1131.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>DFT 1132-1 Mechanical Drafting (Part Time)</b>	1	5	3
<b>DFT 1132-2 Mechanical Drafting (Part Time)</b>	2	6	4
<b>DFT 1133 Technical Illustration</b>	3	0	3
Technical illustration techniques using the air brush, scratch board, ink shading, press-on coordinated tones, line screens, pressure and cut out lettering, pressure symbols, charting and drafting tapes.			
Lab time is spent on the illustrative approach as is applied to presentation of designs, patent drawings, and advertising.			
Most of the drawings are done by the isometric and perspective methods. Prerequisite: DFT 1132.			
<b>DFT 1134 Furniture Specifications</b>	3	0	3
Furniture specifications and billing of materials will be studied. Materials, fabrication, workmanship, finishes, crating and shipping instructions will be included. Prerequisites: DFT 1135, UPH 1111, CAB 1110.			
<b>DFT 1135 Furniture Drafting</b>	3	12	7
An introduction to furniture drafting. Anatomical relationships influencing furniture construction and design. Furniture parts. Scale drawings and full-size drawings will be made. Dimensioning practices and notes will be studied. Prerequisite: DFT 1122.			
<b>DFT 1136 Furniture Drafting</b>	3	15	8
The "working drawing" will be studied and a complete set of drawings will be made of a group of furniture. Related architectural considerations will be included. Notes and materials list will accompany the set of drawings. Prerequisites: DFT 1135, UPH 111, CAB 1110.			
<b>DFT 1138 Furniture Styling and Decoration</b>	3	0	3
A study of the periods and styles of furniture and of the factors which influenced their development. Methods of styling and decorating will be included along with basic principles of design. Prerequisites: UPH 1111, CAB 1110.			
<b>DFT 1180 Drafting—Trade I</b>	2	3	3
This is an introductory course in drafting for students needing a knowledge of drawing principles for reading and describing objects in the graphic language. Instruction and practice is given in lettering, orthographic projection, free-hand sketching, sectioning and dimensioning. The student uses drawing instruments in making orthographic and working drawings, and in the solution of geometrical problems. Prerequisite: None.			

## ECONOMICS

<b>ECO 102 Economics</b>	3	0	3
The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large. Prerequisite: None.			
<b>ECO 104 Economics</b>	3	0	3
Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems. Prerequisite: ECO 102.			
<b>ECO 108 Consumer Economics</b>	3	0	3
Designed to help the student use his resources of time, energy, and money to get the most out of life. It gives the student an opportunity to build useful			

	Hours Class	Per Week Lab	Quarter Hours Credit
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skills in buying, managing his finances, increasing his resources, and to understand better the economy in which he lives. Prerequisite: None.

<b>ECO 200 General Economics</b>	<b>3</b>	<b>0</b>	<b>3</b>
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A general survey course in elementary economics. A brief treatment of the production and distribution of wealth in society, money and banking, and the organization of business.

<b>ECO 201 Principles of Economics I</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Basic economics with attention to control problems of price, competition and money; supply and demand; business organization; firm and family income; labor and industrial relations; government and the economy; gross national product; relationship of income to expenditures; and business cycles. Prerequisite: None.

<b>ECO 202 Principles of Economics II</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Historical development of economic thought; creation of money; banking and the Federal Reserve System; monetary and fiscal policy; price, utility and costs in selected industries, competition and trade. Prerequisite: None.

<b>ECO 203 Principles of Economics III</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Distribution of income; factors of production; wages and collective bargaining; interest and capital; profits and incentives, international payments, trade and gold flow; current economic problems. Prerequisite: ECO 202.

<b>ECO 1101 Economics</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Designed to provide the student with the laws of supply and demand, wages and productivity, and most important, the profit motive. Prerequisite: None.

<b>ECO 1114 Industrial Economics (Basic)</b>	<b>3</b>	<b>0</b>	<b>3</b>
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The fundamental principles of economics including the institutions and practices by which people gain a livelihood in our industrial society. Topics include production, consumption, exchange and distribution of materials and resources, money and credit, business fluctuations, labor and management. Prerequisite: None.

## EDUCATION

<b>EDU 201 Introduction to Education</b>	<b>3</b>	<b>0</b>	<b>3</b>
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A study of education as an institution in society. Emphasis is on the educational system in the United States, its functions, organization, and its history.

## ELECTRICAL

<b>T-ELC 201 Electrical Machinery</b>	<b>3</b>	<b>0</b>	<b>3</b>
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A course in the basic understanding and application of electricity to modern industrial machinery. Included is a study of direct current motors, motor controls and protecting devices, transformers, and the industrial applications of this equipment.

<b>ELC 1112 Direct and Alternating Current</b>	<b>5</b>	<b>12</b>	<b>9</b>
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A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analyses of direct current circuits by Ohm's Law and Kirkchhoff's Law. A study of the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits. Prerequisite: None.

		Hours Class	Per Week Lab	Quarter Hours Credit
ELC 1121-1	<b>Orientation and Theory of Direct Current (Part time)</b>	2	6	4
ELC 1112-2	<b>Theory of Alternating Current</b>	2	6	4
ELC 1113	<b>Alternating Current and Direct Current and Machines and Controls</b>	5	14	10
	Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances such as: thermostats, times, or sequencing switches. Prerequisites: ELC 1112, MAT 1115.			
ELC 1113-1	<b>Alternating Current and Direct Current Motor Generators, and Transformers (Part time)</b>	2	6	4
ELC 1113-2	<b>Alternating Current and Direct Current Controls (Part time)</b>	2	6	4
ELC 1121	<b>Electrical Machines and Controls</b>	2	2	3
	An introduction to the construction, operation and utilization of direct current and alternating current machines. Familiarization with the various types of machine control devices. Prerequisite: ELC 1112.			
ELC 1122	<b>Electrical Maintenance</b>	3	6	5
	A study is made of those parts of the electrical code which affect the work of the industrial maintenance electrician. Practical experience is provided in wiring, installing and connecting the various types of services for lighting, heating and power installations. Training is provided in trouble-shooting in the identification and testing of circuits, in making mechanical adjustments and related maintenance operations. Schematic diagrams are used showing the plan of operation for each system. Prerequisite: ELC 1113, ELC 1121.			
ELC 1124	<b>Residential Wiring</b>	5	9	8
	Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups. Prerequisite: ELC 1113, DFT 1110.			
ELC 1124-E	<b>Residential Wiring (Part time)</b>	2	6	4
ELC 1125	<b>Commercial and Industrial Wiring</b>	2	9	5
	Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems. Prerequisites: ELN 1118, ELC 1124.			
ELC 1125-E	<b>Commercial and Industrial Wiring (Part time)</b>	2	6	4

## ELECTRONICS

<b>T-ELN 201 Industrial Controls</b>	<b>3</b>	<b>2</b>	<b>4</b>
Industrial controls is the study of modern methods of controlling machinery by electronic circuitry. Machinery controls and electronic that automatically operate machines will be studied. Types of motors, generators, control signals and devices, thyratrons, gates, switches, and servomechanism circuits are major areas of study. Prerequisite: T-PHY 103.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>ELN 1118 Industrial Electronics Fundamentals</b>	4	8	7
Basic theory, operating characteristics, and application of vacuum tubes such as: diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes, solid state theory, and other basic applications. Prerequisite: ELC 1113.			
<b>ELN 1118E Industrial Electronics (Part time)</b>	3	5	5
<b>ELN 1119 Industrial Electronics Controls</b>	4	11	8
Basic industrial electronic systems such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyatron tubes, solid state devices, and other basic types and systems commonly found in most industries. Prerequisite: ELN 1118.			

## ENGINEERING GRAPHICS

<b>EGR 101 Engineering Graphics I</b>	2	4	3
The field of drafting is introduced as the student begins study of the lettering, geometrical construction, projections, sections, auxiliary projection, revolution, pictorial drawing, intersection and development. The drawing of fasteners, springs, and gears, detail and assembly drawings, and tracing and reproduction methods are studied. Prerequisite: None.			
<b>EGR 102 Engineering Graphics II</b>	2	3	3
Descriptive geometry is introduced as the student studies representation of common geometrical magnitudes with points, lines, planes, and solids, concurrent noncoplanar forces, the solution of problems, advanced intersection and development. Prerequisite: EGR 101.			

## ENGLISH

<b>ENG 091 Grammar and Composition I</b>	2	2	3
Emphasis on sentence structure, mechanics, paragraph development, and other language skills, such as vocabulary and reading skills, necessary for the student's achievement of his educational goals.			
<b>ENG 092 Grammar and Composition II</b>	2	2	3
Continuation of ENG 091.			
<b>ENG 093 Grammar and Composition III</b>	2	2	3
Continuation of ENG 092.			
<b>ENG 094 Grammar and Composition IV</b>	2	2	3
Continuation of ENG 093.			
<b>ENG 101 English Composition</b>	3	0	3
The study of the use of the English language through the mediums of grammar, written composition, and literature. Prerequisite: None.			
<b>T-ENG 101 Grammar</b>	3	0	3
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: None.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>ENG 102 English Composition</b>	3	0	3
A continuation of ENG 101. The study of the English language through the medium of the reading and written analysis of works of literature. Prerequisite: None.			
<b>T-ENG 102 Composition</b>	3	0	3
Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: None.			
<b>ENG 103 English Composition</b>	3	0	3
A continuation of ENG 101 and ENG 102. The study of the English language through the medium of the preparation of speech materials. The course includes the continuation of reading in literature drawing from all literary forms. Prerequisite: None.			
<b>T-ENG 103 Report Writing</b>	3	0	3
The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum. Prerequisite: T-ENG 102.			
<b>ENG 201 English Literature</b>	3	0	3
A survey of English literature from the Anglo-Saxon Invasion to the Restoration period, 449-1660. Prerequisite: None.			
<b>ENG 202 English Literature</b>	3	0	3
A continuation of English 201 beginning with the Restoration period, 1660, to the Accession of Victoria, 1837. Prerequisite: None.			
<b>ENG 203 English Literature</b>	3	0	3
A continuation of English 201 and 202 beginning with the Accession of Victoria, 1837, to the twentieth century. Prerequisite: None.			
<b>ENG 204 American Literature</b>	3	0	3
The study of American literature from the Puritan Age to the Romantic Movement. Prerequisite: None.			
<b>T-ENG 204 Oral Communication</b>	3	0	3
A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conduct meetings, conferences, and interviews. Prerequisite: None.			
<b>ENG 205 American Literature</b>	3	0	3
A continuation of 204 beginning with the Romantic Movement and extending through the Rise of Realism with major emphasis on Twain, James, Poe, Emerson, Thoreau, Hawthorne, Whitman, and Melville. Prerequisite: None.			
<b>ENG 206 American Literature</b>	3	0	3
A continuation of 204 and 205 beginning with the Realistic Movement and extending into the twentieth century with major emphasis on Steinbeck, Hemingway, Faulkner, Drieser, Sandburg, Frost, Lewis, Anderson, and Porter. Prerequisite: None.			
<b>T-ENG 206 Business Communication</b>	3	0	3
Develops skills in techniques in writing business communications. Emphasis is placed on writing action—getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry. Prerequisite: BUS 102.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>ENG 207 Creative Writing</b>	3	0	3
A foundation course in writing of essays, short stories, and poetry. Student work is read and discussed in class. Reading and discussion of contemporary writers and critics. Prerequisite: ENG 103.			
<b>ENG 1101 Reading Improvement</b>	2	0	2
Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and work group recognition and to train for comprehension in larger units. Prerequisite: None.			
<b>ENG 1102 Communication Skills</b>	3	0	3
Designed to promote effective communication through correct language usage in speaking and writing. Prerequisite: None.			
<b>ENG 1103 Report Writing</b>	3	0	3
Fundamentals of correct language usage applied to report writing. Emphasis is placed on principles of report construction and application to various report forms. Prerequisite: ENG 1102.			

## FURNITURE

<b>T-FUR 102 Construction and Billing I</b>	1	3	2
Emphasis on proper construction of case goods and frame stock. Study of basic construction theory. Identification of furniture construction terms. Interpretation and reading of furniture working drawing. Information on on blueprint lines, dimensioning, procedure and notes. Basic knowledge of materials. Prerequisite: None.			
<b>T-FUR 103 Construction and Billing II</b>			
Continuation of T-FUR 103 C.B.I. with emphasis on making an accurate bill of material of each basic piece of furniture from factory drawings and specifications. Effect of construction on material, machine, and routing will be discussed. Prerequisite: T-FUR 102 or Approval of Advisor.			
<b>T-FUR 104 Characteristics of Wood</b>	2	0	2
The study of basic structure of woods (chemical & physical) used by the furniture industry. Emphasis will be placed on the characteristics that mostly effect these woods in manufacturing - wood-moisture relations, shrink, swell, machine ability, gluing, handling, color, grain, screw strength. Prerequisite: None.			
<b>T-FUR 105 Glues</b>	1	0	1
A study of adhesives currently used by furniture industry. Investigates the types of glues with study of operating characteristics—time factors, temperature, humidity, pressure, gap filling, grain orientation. Equipment used in application, handling and processing will be given attention. Prerequisite: None.			
<b>T-FUR 106 Abrasive Materials Method</b>	2	2	3
Emphasis is on types of abrasive material and their uses, factors affecting different procedures and processes, causes and cures of defects in sanding. Study of equipment. Prerequisite: None.			
<b>T-FUR 107 Finishing Methods &amp; Material</b>			
Study of the finishing methods and materials now used by the furniture industry—process for color, filling of pores, sealing, glazing, body coats, rubbing. Emphasis of various methods of drying. Advantages and disadvantages of material handling equipment—spray guns, conveyors, rubbing.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-FUR 108 Production Equipment I</b>	4	0	4
This course deals with the methods of set-up, operating procedure, capacities and safety of basic woodworking machinery. I.E. Circular saws, planner, band saw, boring machine, lathe, shaper, router, double-end tenon molder, and portable hand tools. Special emphasis on cutting tools. Field trips to production factories and equipment manufacturers. Prerequisite: None.			
<b>T-FUR 109 Production Equipment II</b>			
Continuation of T-FURN 108 P.E.I. and will deal with more complicated types of furniture equipment used at present in Lenoir area. I.E. Profile shaper, tape router, electronic clamps, Bell 124, Special multi-purpose equipment. Field trips and seminars. Prerequisite: T-FUR 108 or approval of advisor.			
<b>T-FUR 112 Routing, Scheduling &amp; Process</b>	2	2	3
A comprehensive study of materials and methods of furniture manufacturing. The flow of material through various departments and equipment as now used by industry. Study of main and alternate processes and their relation to cost, labor, waste and time. Use of charts. Study of material properties and their relation to work cycle. Prerequisite: T-FUR 104, T-FUR 102, T-FUR 108 or approval of advisor.			

## GEOGRAPHY

<b>GEO 201 Geography</b>	3	2	4
A survey of the major world regions and the relations of human activities to the physical environment. Prerequisite: None.			
<b>GEO 202 Regional Geography</b>	5	0	5
Analysis of World Geography utilizing the regional method of study with emphasis on training in the techniques of thinking geographically about world problems. Prerequisite: GEO 101 or approval of instructor.			
<b>GEO 203 Economic Geography</b>	3	0	3
A study of the geographical factors in production, distribution, and consumption of the major products of the world. Prerequisite: None.			

## GUIDANCE

<b>GUI 101 Introduction to Education</b>	1	0	1
This course is designed to acquaint the student with his school and to review with him certain appropriate study techniques. Prerequisite: None.			

## HISTORY

<b>HIS 101 Western Civilization</b>	3	0	3
A general survey of the ancient near East; the classical civilizations of Greece and Rome; the new religious civilizations of the early Middle Ages; and the Renaissance. Prerequisite: None.			
<b>HIS 102 Western Civilization</b>	3	0	3
A survey of the Age of the Reformation; exploration, colonization, and the Commercial Revolution; the Age of Absolutism; the Intellectual Revolution; the Age of Democratic Revolutions; and the Napoleonic Era. Prerequisite: None.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>HIS 103 Western Civilization</b>	3	0	3
A survey of the Industrial Revolution; the European political revolts of 1830 and 1848; the political unification of Germany and Italy; World War I and its aftermath; the rise of European totalitarian states; the upsurge of nationalism in Africa and the Orient; World War II: and the Cold War and Communist Free World Competitive Coexistence. Prerequisite: None.			
<b>HIS 201 American History</b>	3	0	3
The study of the origins and development of the United States through the Constitutional period. Prerequisite: None.			
<b>HIS 202 American History</b>	3	0	3
The study of the history of the United States from the Constitutional period through the Civil War and the Reconstruction period. Prerequisite: None.			
<b>HIS 203 American History</b>	3	0	3
The study of the history of the United States from the Reconstruction period to the present. Prerequisite: None.			

## HUMANITIES

<b>HUM 101 Personal and Cultural Appreciation I</b>	4	0	4
A course designed to help students to greater appreciation and understanding of themselves and their culture as a result of systematic study of the great ideas of each period of western civilization and the influence on the artistic, dramatic, literary, and musical expressions of these periods. Prerequisite: None.			
<b>HUM 102 Personal and Cultural Appreciation II</b>	4	0	4
A continuation of Humanities 101. Prerequisite: Humanities 101.			
<b>HUM 103 Humanities in Twentieth Century America</b>	4	0	4
A critical study in considerable depth of modern literature, art, and philosophy and their relevance to American life in our rapidly changing technological and nuclear age. Prerequisite: None.			

## INDEPENDENT STUDY

<b>IST 199; T-IST 199; IST 1199 Independent Study</b>	1 to 6 credit hours
This course provides opportunity for a student to develop a study project in any area in which professionally qualified instruction is available. Student develops project in a conference with advisor and instructor. Approval request forms are then approved by appropriate directors and the Dean of Instruction. Credit earned generally meets elective requirements of a degree or diploma. Exact amount depends on duration and depth of project, but no more than six credit hours.	
<b>IST 299; T-IST 299 Independent Supply</b>	1 to 6 credit hours
This course provides opportunity for the second year student to develop a study project in any area in which professionally qualified instruction is available. Student develops project in a conference with advisor and instructor. Approval request forms are then approved by appropriate directors and Dean of Instruction. Credit earned generally meets elective requirements of a degree. Exact amount depends on duration and depth of project but no more than six credit hours.	

## INDUSTRIAL SCIENCE

<b>T-ISC 102 Industrial Safety</b>	3	0	3
Problems of accidents and fire in industry. Management and supervisory responsibility for fire and accident prevention. Additional topics include accident reports, good housekeeping, protective equipment, accident code and fire regulations, safety instruction, use of safety committee, insurance bureau and how to promote safety programs. Prerequisite: None.			
<b>T-ISC 103 Production Control</b>	1	3	2
Day-to-day plant direction, forecasting, product planning and control, scheduling, dispatching and routing. Case histories are discussed with corrective action developed. Prerequisite: MAT 110 or consent of advisor.			
<b>T-ISC 201 Industrial Organization and Management</b>	3	0	3
Organizational structure for industrial management; operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting and markets, selection and layout of physical facilities; selection, training and supervision of personnel as found in typical industrial organizations. Prerequisite: None.			
<b>T-ISC 202 Quality Control</b>	3	0	3
Principles and techniques of quality control and cost saving. Organization and procedure for efficient quality control. Functions, responsibilities, structure, costs, reports, records, personnel and vendor-customer relationships in quality control. Sampling inspections, process control and tests for significance. Prerequisite: None.			
<b>T-ISC 203 Motion Study</b>	3	2	4
Types of methods studies and their applications. Process charts, analysis sheets, time study, work simplification, skill and effort rating. Prerequisite: None.			
<b>T-ISC 204 Value Analysis</b>	3	0	3
The modern concept in the control of manufacturing production. This course will provide the students an opportunity to study a production system with the specific purpose of identifying unnecessary costs. The objective of the concepts and techniques of value analysis is to make possible a degree of effectiveness in identifying and removing unnecessary cost by the use of sound decisions through a common sense approach. Prerequisite: None.			
<b>T-ISC 207 Foremanship Supervision</b>	3	0	3
The foreman's responsibility for planning, organizing, directing, controlling, and coordinating supervisory activities. It teaches the supervisor the basic functions of an organization and his responsibility in carrying out the objectives in accordance with the organization's plan. Included in the course are such topics as establishing lines of authority, functions of departments of units, duties and responsibilities, policies, and procedures, and rules and regulations. Prerequisite: T-BUS 272, or consent of advisor.			
<b>T-ISC 209 Plant Layout</b>	3	2	4
A practical study of factory planning with emphasis on the most efficient arrangements of work areas to achieve lower manufacturing costs. Layouts for small and medium-sized plants, layout fundamentals, selection of production equipment and materials handling equipment. Effective management of men, money and materials in a manufacturing operation. Prerequisites: T-MEC 201, T-DFT 102.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-ISC 214 Product Development</b>	3	0	3
This course of study is to familiarize the student with product development as it relates to the complete manufacturing organization. The evolution from original idea to retailer involving sales, design and engineering, cost, plant production, shipping, and outside agencies. Prerequisite: None.			
<b>ISC 1101 Industrial Safety</b>	3	0	3
A study of the development of Industrial Safety; accident occurrence and prevention; analysis of accident causes and costs; basic factors of accident control; safety education and training; accident reporting and records; employer and employee responsibility; safety organizations; first aid; mechanical safeguards; personal protective equipment use; materials handling; fire prevention and protection; safety codes; and accident statistics. Prerequisite: None.			
<b>ISC 1102 Industrial Organization &amp; Management</b>	3	0	3
Organizational structure for industrial management; operational and financial activities, including accounting, budgeting, banking, credit and industrial risk, forecasting and markets, selection and layout of physical facilities; selection, training and supervision of personnel as found in typical industrial organizations. Prerequisite: None.			
<b>ISC 1103 Production Control</b>	1	3	2
Production planning, dispatching, progress reporting, adjusting and replanning systems and charts which help effectively control production will be developed and studied. Material wastes controls, labor controls, indirect labor controls, and overhead controls as they relate to production control will be dealt with.			
<b>ISC 1110 Production Control</b>	3	2	4
Production planning, dispatching, progress reporting, adjusting and replanning systems and charts which help effectively control production will be developed and studied. Material wastes controls, labor controls, indirect labor controls, and overhead controls as they relate to production control. Prerequisites: TEX 1108, TEX 1120, TEX 1110.			
<b>ICS 1110 Time Study &amp; Time Standards</b>	2	2	3
Primary emphasis on use of stop watch. Breaking down repetitive operation into elements. Timing the elements. Work readings. Operator performance rating. Avoidable delays. Allowances for unavoidable delays. Setting time standards. Timing delays. Technique of work sampling. Bench marks for "normal work pace. Motion study such as is needed to intelligently use predetermined time standards. Practice in building up standard times for specific operations using tables of predetermined times for the elements of the operation.			
<b>ISC 1113 Quality Control</b>	3	0	3
Setting quality standards for customer acceptance. Final inspection to police these standards. Prior inspections and specifications to achieve final quality standard at minimum cost. Dimensions, tolerances, gages and other techniques to control dimensions. Qualities other than dimensions are more intangible. How to set standards and police performance in such areas. Receiving inspection, in process inspection, sampling.			
<b>ISC 1114 Supervisory Responsibilities</b>	3	0	3
This course deals with such topics as fundamentals of supervision, relationships on the job, human relations, performance and job evaluation, the art of motivating people, and effective communications.			
<b>ISC 1121 Cost Records and Cost Estimates</b>	3	0	3
Estimate of cost (materials, labor, overhead, etc.). Materials cost deals with price and grade, cost of delivery and storage, and percent utilization. Labor cost studies deal with such factors as time required, hourly rate,			

	Hours Class	Per Week Lab	Quarter Hours Credit
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quantities produced, turnover and cost of training. Overhead costs are studied over specific periods of time with advantages and limitations of prorating overhead items of cost. Prerequisites: TEX 1108, TEX 1120, TEX 1110.

<b>ISC 1123 Work Measurement</b>	3	2	4
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The basic study of the principles of work simplification, motion study fundamentals, and time study techniques. The use of predetermined time—schedules and the use of the stop watch as they apply to ask performance of the operator in his work performance. The study of flow diagrams and methods evaluation for production purposes. Prerequisites: TEX 1108, TEX 1120, TEX 1110.

<b>ISC 1125 Supervisory Responsibility</b>	3	0	3
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This course deals with such topics as fundamentals of supervision, relationships on the job, human relations, performance and job evaluation, the art of motivating people, and effective communications. Prerequisite: PSY 1101.

## LIBRARY

<b>T-LIB 101 Introduction and Orientation to Library Services</b>	3	2	4
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Short history of libraries and library service. Introduction to card catalogue, book catalogue, classification systems with emphasis on Dewey Decimal system, and shelf arrangement. Explanation of departmental organization and inter-relationship of departments. Prerequisite: None.

<b>T-LIB 102</b>	3	2	4
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Principles of book selection with emphasis on the sources of guidance in book selection, the evaluation of these sources which include book review, book list, trade bibliographies and publishers' annotations. The policy and practice of buying books and techniques of ordering. Prerequisite: None.

<b>T-LIB 103 Library</b>	3	0	3
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Study of general encyclopedias, special reference works, year books, dictionaries, and other basic sources used in reference work. Also this course includes practice in the preparation of simple bibliographies, emphasizing correct form. Prerequisite: None.

<b>T-LIB 201</b>	3	2	4
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An introduction to classification systems with particular emphasis on the Dewey Decimal Classification. The purpose is to give an understanding of the classification numbers, not to make classifiers of the students. Study of the principles of dictionary cataloging. Practice in dictionary cataloging plus practice in assigning subject headings and studying fundamentals of library filing. Prerequisite: None.

<b>T-LIB 202</b>	3	0	3
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A study of some routing circulation procedures, including circulation of books, pamphlets, and other materials. Techniques of physical inventory using shelf-list control. Care and repair of library materials. Prerequisite: None.

<b>T-LIB 203 Practicum</b>	0	6	3
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Student will be placed in an approved library for 6 hours per week of supervised learning experiences under a professional librarian, putting into practice the various skills learned. Prerequisite: Approval of Department.

<b>T-LIB 204 Practicum</b>	0	6	3
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Continuation of Library Science Practice. Six hours per week of practice work in libraries. Prerequisite: Approval of Department.

## MACHINE SHOP

<b>T-MEC 101 Machine Processes</b>	0	6	2
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An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming. Prerequisite: None.

<b>T-MEC 102 Machine Processes</b>	0	6	2
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Advanced operations on lathe, drilling, boring and reaming machines. Milling machine theory and practice. Thorough study of the types of milling machines, cutters, jig and fixture devices, and the accessories used in a modern industrial plant. Safety in the operational shop is stressed. Prerequisite: T-MEC 101.

<b>T-MEC 103 Machine Processes</b>	0	6	2
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Modern machine tools of industry. Theory and practice with shaper, slotter, planer, turret lathe, screw machine, grinding and finishing machines. Gear design and the processes of gear manufacturing. Prerequisite: T-MEC 102.

<b>T-MEC 201 Machine Processes</b>	2	6	4
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Newer concepts of work handling and automatic machining process. Chipless production and new techniques in metal forming. Analysis of high-energy forming, ultrasonic machining, electrolytic metal removal, chemical milling, numerical controls and simplified building block numerical control systems. Prerequisite: T-MEC 103.

<b>T-MEC 205 Strength of Materials</b>	3	2	4
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Study of principles and analysis of stresses which occur within machine and structure elements subjected to various types of loads such as static, impact, varying and dynamic. Analyses of these stresses are made as applied to thin-walled cylinders and spheres, riveted and welded joints, beams, columns and machine components. Prerequisites: T-PHY 106, T-MAT 103.

<b>T-MEC 210 Physical Metallurgy</b>	3	3	4
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Introductory course in metallurgy, a basic study of the properties of metals and alloys. Analysis of the structure of metals and alloys, atomic structure, nuclear structure, and nuclear reactions. Solid (crystalline) structures, methods of designating crystal planes, liquid and vapor phases, phase diagrams, and alloy systems. Prerequisite: T-PHY 101.

<b>T-MEC 211 Physical Metallurgy</b>	3	3	4
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Properties of metals and alloys, the reactions of metals, diffusion, carburizing, metal bonding and homogenization, recrystallization and grain growth, age, hardening, nitriding, internal oxidation, heat treatment of steel, laboratory experiments and demonstrations. Prerequisite: T-MEC 210.

<b>T-MEC 212 Practical Automation</b>	3	2	4
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A comprehensive study of automation as it is interpreted and practiced by American industry of today. The fundamentals of automation and its effects in industrial productivity, labor supply and demand, equipment and processes. Students will solve problems encountered while installing an automated system. Prerequisite: None.

<b>T-MEC 213 Production Planning</b>	3	3	4
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Day-to-day plant direction; forecasting, product planning and control, scheduling, dispatching, routing, and inventory control. Case histories are discussed in the classroom, and courses of corrective action are developed. Drafting room layouts for planning and control. Prerequisite: T-DFT 102. Corequisite: T-MEC 201.

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-MEC 214 Tool Engineering</b>	3	0	3
An introduction to the problems of tool engineering with emphasis on planning the processes of production, designing and developing the necessary tools, and utilizing available manufacturing facilities; practical analysis and comparison of the use and cost of tools, jigs and fixtures, dies, molds, and gauges as they are utilized in our modern day manufacturing and production methods. Prerequisites: T-DFT 102, T-MEC 201.			
<b>T-MEC 235 Hydraulics and Pneumatics</b>	3	3	4
The basic theories of hydraulic and pneumatic systems. Combinations of systems in various circuits. Basic designs and functions of circuits and motors, controls, electrohydraulic servomechanisms, plumbing, filtration, accumulators and reservoirs. Prerequisite: T-PHY 102.			
<b>T-MEC 237 Control Systems</b>	2	4	4
Hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance, accuracy, applications and their utilization in industrial processes. Prerequisites: T-PHY 102, T-ELC 201.			
<b>MEC 1101 Machine Shop Theory and Practice</b>	4	12	8
An introduction to the machinist trade and the potential it holds for craftsman. Deals primarily with the identification, care and use of basic hand tools and precision measuring instruments. Elementary layout procedures and processes of lathe, drill press, grinding (off-hand) and milling machines will be introduced both in theory and practice. Prerequisite: None.			
<b>MEC 1101-1 (Part Time)</b>	2	6	4
<b>MEC 1101-2 (Part Time)</b>	3	15	8
<b>MEC 1102 Machine Shop Theory and Practice</b>	3	12	7
Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine shaper. The student will be introduced to the basic operations on the cylindrical grinder and will select projects encompassing all the operations, tools and procedures thus far used and those to be stressed throughout the course. Prerequisite: MEC 1101.			
<b>MEC 1102-1 (Part Time)</b>	2	6	4
<b>MEC 1102-2 (Part Time)</b>	2	6	4
<b>MEC 1103 Machine Shop Theory and Practice</b>	3	15	8
Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, and worm gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder. Prerequisites: MEC 1102.			
<b>MEC 1103-1 (Part Time)</b>	2	6	4
<b>MEC 1103-2 (Part Time)</b>	2	6	4
<b>MEC 1104 Machine Shop Theory and Practice</b>	3	12	7
Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc. Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishing of good work habits and attitudes acceptable to the industry. Prerequisite: MEC 1103.			
<b>MEC 1104-1 (Part Time)</b>	2	6	4
<b>MEC 1104-2 (Part Time)</b>	2	6	4

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>MEC 1112 Machine Shop Processes</b>	0	6	2
To acquaint the student with the procedures of layout work and the correct use of hand and machine tools. Experiences in the basic fundamentals of drill press and lathe operation; hand grinding of drill bits and lathe tools; set-up work applied to the trade. Prerequisite: None.			
<b>MEC 1113 Shop Processes</b>	2	3	3
Study of practices used in metalworking shops: introduction to how materials can be utilized, and to the processes of shaping, forming, and fabricating of metals. Demonstration of the metalworking lathes, grinders, drills, milling machines, shapers, planers, saws, broachers, gear cutting machines and finishing machines. A study of the capabilities of these machines. Prerequisite: None.			
<b>MEC 1114 Shop Processes</b>	2	3	3
Comparison of the unit-production and mass-production systems. Casting, forging and allied processes, welding and sheet metal working processes are demonstrated and discussed. Mass-Production methods are studied in relationship to precision dimensional control. Prerequisite: MEC 1113.			
<b>MEC 1115 Treatment of Ferrous Metals</b>	2	3	3
Investigates the properties of ferrous metals and tests to determine their uses. Instructions will include some chemical metallurgy to provide a background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous metals, producing iron and steel, theory of alloys, shaping and forming, heat treatments for steel, surface treatments, alloy of special steel, classification of steels, and cost iron will be topic for study. Prerequisite: None.			
<b>MEC 1116 Treatment of Nonferrous Metals</b>	2	3	3
Investigates the properties of non-ferrous metals and tests to determine their uses. Primary interest will be on aluminum, magnesium, zinc, lead and chromium. Non-ferrous alloys such as brass, bronze, babbitt and cemented carbides will be studied. A discussion of stainless steel will be included. Prerequisite: MEC 1115.			
<b>MEC 1117 Structure of Metals</b>	3	2	4
A study of stresses which occur within machines subjected to various loads are made. Analysis of these stresses are made as applied to thin-walled cylinders and spheres, riveted and welded joints, beams, columns and machine components. Prerequisite: PHY 1102 or Approval of Department.			
<b>MEC 1118 Advanced Machine Processes</b>	3	12	7
An advanced study of the operations of the machine shop, utilizing all machines. The student will receive instructions on gauging practices and its applications to the finished product, and will become familiar with various gauging procedures. Students will be assigned individual projects by which he will gain proficiency on the various types of machines. Prerequisite: MEC 1104.			
<b>MEC 1119 Advanced Machine Processes</b>	3	9	6
This course will offer a study of the more complex machines within the shop. Step-by-step study of tooling for the automatic screw machines, turret lathe, and numerical tape-controlled machine will be explored. Automatic chucking and clamping systems will be emphasized. Prerequisite: MEC 1118.			
<b>MEC 1120 Machine Repair</b>	1	3	2
This course will offer the student a look into the machines themselves. Possible reasons for machine break-down will be explored. Emphasis is placed on the proper maintenance of machinery as well as preventative maintenance. Repair and maintenance manuals for various machines will be reviewed. Prerequisite: MEC 1104.			
<b>MEC 1121 Machine Repair</b>	1	3	2
A continuing study of the inner parts of machinery. Special interest will be placed on commercial standards, designs, and development of necessary			

	Hours Class	Per Week Lab	Quarter Hours Credit
tools and accessories. A comparison of purchase price on manufactured items of replacement parts will be studied. Prerequisite: MEC 1120.			
<b>MEC 1122 Production Procedures</b>	4	3	5
A study of product planning and control, scheduling, and routing of operations will be surveyed. Principles and techniques of quality control and cost saving, sampling inspections, graphs and charts are emphasized. Both statistical and deminsional quality control is reviewed as well as a study of the different processes to produce an item. Prerequisite: MEC 1104.			
<b>MEC 1123 Shop Processes</b>	2	3	3
Continuation in the study of methods of manufacturing parts. Metal machining will be the main emphasis in this course. Further operations on metal cutting saws, lathes, milling machines, grinders and introduction to gear cutting equipment will be reviewed. How dimentional control and precision measurement coincides with drafting procedures are an important section of this study. Prerequisite: MEC 1114.			
<b>MEC 1124 Shop Processes</b>	2	3	3
Some of the newer concepts of work handling and automatic machining processes is discussed. Instructions are offered on automatic screw machines, turret lathes, numerical controlled systems as well as chipless machining. Major emphasis is on the integration of drafting processes to the machined part and how each effects the other. Prerequisite: MEC 1123.			
<b>MEC 1139 Basic Hydraulics and Pneumatics</b>	3	3	4
The basic theories and uses of hydraulic and pneumatic systems, and also, the combination of systems. Basic designs and functions of circuits and motors, controls, electro-hydraulic servo-mechanisms, filtration, accumulators and reservoirs. Installation and maintenance of the components will be made by the students. Prerequisite: PHY 1101.			
<b>MEC 1147 Systems of Measurement and Measuring Tools</b>	2	0	2
A basic study of measurement and the various systems. How to use and read the various rules, scales, calipers, micrometers and other precision measuring tools used in mechanical work. Included is the reading of the basic electrical meters used in testing. Prerequisite: None.			
<b>MEC 1298 Special Problems in Mechanics</b>	(Maximum Credit 6 hrs.)		
The purpose of this course is to broaden the students' experiences in the areas of mechanics. Problems involving experimentation, investigation and writing of a research report involving automobiles, mechanical operations and general maintenance and repair required for machinery may be basis for investigation. Prerequisite: All curriculum courses.			

## MATHEMATICS

<b>MAT 090 Developmental Mathematics I</b>	2	3	4
Emphasis on mathematic skills required for successful performance in regular credit programs.			
<b>MAT 091 Developmental Mathematics II</b>	2	3	4
Continuation of MAT 090.			
<b>MAT 092 Developmental Mathematics III</b>	2	3	4
Continuation of MAT 091.			
<b>MAT 101 College Mathematics</b>	5	0	5
An introduction to college mathematics including the study of sets, number systems, elementary logic, and algebraic processes.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-MAT 101 Technical Math</b>	5	0	5
The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed. Prerequisite: Satisfactory score on S.C.A.T.			
<b>MAT 102 College Mathematics</b>	5	0	5
Further study in college mathematics including algebraic fractions, factoring, exponents, logarithms, and the solution of equations and inequalities. Prerequisite: MAT 101.			
<b>T-MAT 102 Technical Math</b>	5	0	5
A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the bi-normal expansion, complex numbers, solution of oblique triangles and graphs of the trigonometric functions are studied in depth. Prerequisite: T-MAT 101.			
<b>MAT 103 College Mathematics</b>	5	0	5
A continuation of MAT 102 including the study of trig. functions of acute and general angles, right and oblique triangles, fundamental identities, and the trigonometric equations. Prerequisite: MAT 102.			
<b>T-MAT 103 Technical Mathematics</b>	5	0	5
The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Applications of these concepts to practical situations are stressed. Prerequisite: T-MAT 102.			
<b>MAT 110 Business Math</b>	5	0	5
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: Satisfactory score on S.C.A.T.			
<b>MAT 111 Algebra</b>	5	0	5
An axiomatic presentation of the real number system as an ordered field, in which axioms, definitions, and theorems are used to justify traditional algebraic processes, involving such topics as algebraic fractions, factoring, exponents, logarithms, and the solution of equations and inequalities.			
<b>MAT 112 Trigonometry</b>	5	0	5
A study of functions of acute and general angles, fundamental identities, logarithms, radian measure, trigonometric equations, addition formulas, oblique triangle, and complex numbers. Prerequisite: MAT 111.			
<b>MAT 113 Analytic Geometry and Calculus I</b>	5	0	5
This course includes the study of coordinate systems, Locl, Linear, and Quadratic graphs, conics, limits, continuity, and differentiation. Prerequisite: MAT 112.			
<b>MAT 201 Analytic Geometry and Calculus II</b>	5	0	5
A study of indefinite and definite integrals of algebraic functions and their applications. Areas, volumes, moments, and fluid pressure are included. Also included are transcendental functions, polar coordinates, integration by parts, integration by substitution, integration by partial practions.			
<b>MAT 202 Analytic Geometry and Calculus III</b>	5	0	5
Topics include multiple integration, approximate integration, improper integrals, indeterminate forms, infinite series and expansion of functions and vectors. Prerequisite: MAT 201.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-MAT 214 Statistics</b>	5	0	5
The theory of statistics and its application in modern business. Kinds of regularity that exist among random fluctuations. Experience in associating and using mathematical models to interpret physical phenomena and predicting the outcomes of experiments related to practical business problems. Prerequisite: T-MAT 101.			
<b>MAT 220 Differential Equations</b>	3	0	3
A study of the methods of solution of ordinary differential equations. Prerequisite: MAT 202.			
<b>MAT 1101 Fundamentals of Math</b>	5	0	5
Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth. Prerequisite: None.			
<b>MAT 1101N Fundamentals of Math</b>	3	0	3
A practiced arithmetic review including basic operations in fractions, decimals, percentages, rates and proportion, Fahrenheit and Centigrade scales, and weights and measures. Mathematics of designs and solutions will be introduced. Prerequisite: None.			
<b>MAT 1102 Algebra</b>	5	0	5
Basic concepts and operations of algebra: historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition and subtraction, graphing; exponents, logarithms, tables and interpolation. Prerequisite: None.			
<b>MAT 1103 Geometry</b>	3	0	3
Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations. Prerequisite: None.			
<b>MAT 1104 Trigonometry</b>	3	0	3
Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations. All topics are applied to practical problems. Prerequisite: None.			
<b>MAT 1111 Slide Rule</b>	2	0	2
A study of the mechanics involved in the use of the slide rule. Multiplication, division, trigonometric functions, powers and roots are covered. Prerequisite: None.			
<b>MAT 1112 Building Trades Math</b>	3	0	3
Practical problems dealing with volumes, weights, ratios, mensuration; and basic estimating practices for building materials. Prerequisite: None.			
<b>MAT 1115 Electrical Math</b>	5	0	5
A study of fundamental concepts of algebra; basic operations of addition, subtraction, multiplication, and division; solution of first order equations, use of letters and signs, grouping, factoring, exponents, ratios, and proportions; solution of equations, algebraically and graphically; a study of logarithms and use of tables; and introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current. Prerequisite: None.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>MAT 1120 Applied Mathematics</b>	3	0	3
Practical problems are especially selected to ensure mastery of mathematics principles applied to the automobile trades. Prerequisite: MAT 1101.			
<b>MAT 1123 Math: Machinist</b>	3	0	3
Introduces gear ratio, lead screw and indexing problems with emphasis on application to the machine shop. Practical applications and problems furnish the trainee with experience in geometric propositions and trigonometric relations to shop problems; concludes with an introduction to compound angle problems. Prerequisite: MAT 1104.			

## MUSIC

<b>MUS 101 Music Appreciation</b>	3	0	3
Designed to give a basic orientation to music with emphasis on simple form and analysis, instrumentation, althetics, masterpieces, and other significant work. Prerequisite: None.			
<b>T-MUS 101 Recreational Music</b>	1	4	3
The purpose of this course is to develop an understanding of the value and use of music in a recreation program. The instruments, aids, and materials used will be given special attention. Practice sessions & demonstrations of teaching techniques and skills will be afforded the students. Prerequisite: None.			
<b>MUS 201 Folk, Square, and Social Dance</b>	1	4	3
This skill course is designed to develop specific talents in the area of recreational dance. Activity sessions will stress the different types of dances, the skills involved, and the techniques used in teaching dancing to different age groups. Appropriate dances with adaptations for the different handi-capped groups will also be stressed. Adequate class time will be used for student participation and practice. Prerequisite: None.			

## NURSING

<b>NUR 1101 Basic Science</b>	5	4	6
This course is designed to give the beginning student an understanding of basic science principles and their relationships to practical nursing. This course includes study of the structure and functions of the human body, principles of foods and nutrition and selected efforts of microbiology as related to nursing. Prerequisite: None.			
<b>NUR 1102 Introduction to Patient Care</b>	6	6	8
This course is designed to provide the opportunity for students to gain a knowledge of principles which are basic to effective and safe nursing care. Emphasis is placed on the development of the essential skills for the performance of those nursing measures that are normally the responsibility of the Licensed Practical Nurse. Also included is the development of appreciations which will assist the student's understanding of her role as a member of the medical team, in establishing effective relationships with her co-worker and patients, and in establishing realistic personal and vocational goals. Prerequisite: None.			
<b>NUR 1103 Medical-Surgical Nursing I</b>	4	0	4
This course is designed to provide the student the opportunity to gain an understanding of the nursing needs of patients who have various medical-surgical conditions and the develop further understanding of the therapeutic			

	Hours Class	Per Week Lab	Quarter Hours Credit
measures of concern to the practical nurse. Prerequisite: NUR 1101, NUR 1102.			
<b>NUR 1104 Hospital Care of Patients</b>	0	24	8
Due to the structure of the program, this course offers selected clinical experience in one or a combination of three specialties which include medical-surgical nursing care of the maternity patient and the newborn infant as well as nursing of infants and children. It provides these selected experiences to increase the student's knowledge of the patient's condition and beginning skills in safe effective nursing in the areas mentioned previously. Prerequisite: NUR 1101, NUR 1102.			
<b>NUR 1105 Medical-Surgical Nursing II</b>	9	0	9
A continuation of NUR 1103. Prerequisite: NUR 1103, NUR 1104, NUR 1109, NUR 1110.			
<b>NUR 1106 Hospital Care of Patients</b>	0	24	8
A continuation of NUR 1104. Prerequisite: NUR 1103, NUR 1104, NUR 1109, NUR 1110.			
<b>NUR 1107 Medical-Surgical Nursing III</b>	12	0	12
This course is a continuation of Medical-Surgical Nursing I and II. In addition, it prepares the student for care of the seriously ill patient in an assistant role. The course also includes an orientation of the student to her obligations and responsibilities as a Licensed Practical Nurse to herself, to her community, and to her profession. Prerequisites: NUR 1105, NUR 1106, NUR 1109, NUR 1110, NUR 1111.			
<b>NUR 1108 Hospital Care of Patients</b>	0	24	8
A continuation of NUR 1104 and NUR 1106. Prerequisite: NUR 1105, NUR 1106, NUR 1109, NUR 1110, NUR 1111.			
<b>NUR 1109 Maternal &amp; Infant Care</b>	4	0	4
This course is designed to provide opportunities for students to acquire the knowledge, understanding and skill needed for rendering safe and effective nursing care to the maternity patient and newborn infant. Classroom instruction provides the background essential for planned clinical experience centered around analysis of nursing needs and formulation of a nursing care plan to meet individual patient needs. Prerequisite: NUR 1101, NUR 1102.			
<b>NUR 1110 Care of Infants &amp; Children</b>	4	0	4
This course is designed to provide opportunities for students to acquire the knowledge, understanding and skills needed for rendering safe and effective nursing care of infants and children. Classroom instruction provides the background essential for planned clinical experiences centered around analysis of nursing needs and formulation of a nursing care plan to meet individual patient needs.			
<b>NUR 1111 Drug Administration</b>	3	0	3
The basic concepts of drug therapy and an appreciation of the responsibilities of the necessary limitations of the Licensed Practical Nurse in the administration of medication are emphasized. Prerequisite: NUR 1103, NUR 1104.			

## PHILOSOPHY

<b>PHI 201 Introduction to Philosophy</b>	3	0	3
An introduction to the subject matter and methods of philosophy to include the analysis of fundamental issues underlying deductive and inductive logic; theories of perception, mind, body, and value.			

## PHYSICAL EDUCATION

(No Prerequisites)

<b>PED 110 Archery</b>	0	2	1
Designed to teach students the fundamentals, skills, history and rules with special emphasis on safety practices, etiquette, and value which carry over into a useful leisure time activity.			
<b>PED 111 Badminton</b>	0	2	1
Deals with beginning skill in the basic strokes and a general knowledge of the history, rules, and strategy of the game.			
<b>PED 112 Bowling</b>	0	2	1
The fundamentals of ball selection, grips, stance, and delivery are taught along with rules, history, and scoring. Special emphasis is placed on spot bowling.			
<b>PED 113 Golf</b>	0	2	1
Designed for teaching the grips, stance, serving, and use of various clubs, along with history and etiquette of play.			
<b>PED 114 Physical Fitness</b>	0	2	1
An introduction to physical activity with emphasis being placed on cardiovascular system, strength and efficiency in executing basic skills which may arise in play and daily living.			
<b>PED 115 Tennis</b>	0	2	1
An elementary course in the history, rules, and regulations. Emphasis will be placed on the fundamentals of the game with prime consideration given to strokes and footwork.			
<b>PED 116 Beginning Skiing</b>	0	2	1
This course is for the non-skier. An elementary course designed to get the individual to the point that he can ski proficiently.			
<b>PED 117 Beginning Swimming</b>	0	3	1
A course designed for the non-swimmer. Basic strokes and water safety based upon American Red Cross Programs of instruction.			
<b>PED 118 Recreation Activities</b>	0	2	1
This course includes lectures and laboratory practice in the basic fundamentals of table tennis, horseshoe, shuffleboard, darts, quoits, and croquet. The history, rules, and strategy involving each activity will be included.			
<b>PED 130 Basketball</b>	0	2	1
A course designed to study the rules, strategy, and history as well as the fundamental skills of beginning basketball.			
<b>PED 131 Flag Football</b>	0	2	1
Includes the fundamental skills, history, rules, and strategy of flag football.			
<b>PED 132 Soccer</b>	0	2	1
Designed to teach the fundamental skills, history, rules, and strategy with emphasis being placed on practice and execution of activity skills.			
<b>PED 133 Softball</b>	0	2	1
The study of history, rules, skills, and strategy with emphasis on defensive play by positions.			
<b>PED 134 Volleyball</b>	0	2	1
A course designed to include the fundamental skills, history, rules, and strategy of the game, with special emphasis on carry-over value of activity.			
<b>PED 150 Track and Field</b>	0	2	1
A course designed to develop knowledge, skill and interest in track and field events.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>PED 151 Modern Dance</b>	0	2	1
A course designed to develop and improve fundamental skills in dance movements and techniques, and to encourage appreciation of dance as an art form and medium of education.			
<b>PED 152 Folk and Square Dance</b>	0	2	1
A course in the development and successful performance of dance skills in regional American folk dances.			
<b>PED 160 IndividualActivity</b>			
Specialized activities approved by the Physical Education and Recreation Department for a particular student.			
<b>PED 180 Personal &amp; Community Health</b>	3	0	3
This course is designed to develop an awareness of the personal, community, and world-wide importance of health. Special emphasis is placed on the physical mental and emotional aspects of the human body. Health problems, their causes and prevention will also be stressed.			
<b>PED 216 Advanced Skiing</b>	0	2	1
This course is designed for advanced students in perfecting skills in the following areas: slalom, down-hill racing, turns, and jumps, with emphasis on control and safety. Prerequisite: PED 116 or approval of instructor.			

## PHYSICAL SCIENCE

<b>PHS 101-102-103 Man and His Physical Environment</b>	2	2	3
An integrated perspective of the physical sciences, study of selected topics such as systems of measurement, the expanding universe, structure of earth, kinetic molecular theory of matter, energy (types, transformations, utilization), properties of elements and compounds, structure and utilization of atoms. The role of science in the development of civilization. Prerequisite: None.			
<b>T-PHS 105 Survey of Physical Science</b>	3	0	3
A general survey of astronomy, physics, geology, and chemistry. The astronomy emphasizes our solar system with a brief survey of other areas of general interest. Physics is approached by such as photography, meterology, radio and television, home appliances, and the automobile with physical principles illustrated. A physical geology of the earth is briefly surveyed with the earth's structure, constitution, and changing face studied. The chemistry of, everyday materials is given after a brief look at some broad elementary principles. Prerequisite: None.			
<b>T-PHS 106 Survey of Physical Science</b>	3	0	3
A continuation of above. Prerequisite: T-PHS 105.			

## PHYSICS

<b>PHY 201 General Physics I</b>	3	2	4
A study of classical and modern physics in which the analytic approach is employed and calculus is used as needed. Mechanics, sound, and heat are included.			
<b>PHY 202 General Physics II</b>	3	2	4
A continuation of PHY 201 including magnetism and electricity. Prerequisite: PHY 201.			
<b>PHY 203 General Physics III</b>	3	2	4
A continuation of PHY 203 including light, optics, and modern Physics. Prerequisite: PHY 202.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>T-PHY 101 Physics: Properties of Matter</b>	3	2	4
A fundamental course covering several basic principles of physics. The division's included are solids and their characteristics, liquids at rest and in motion, gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course. Prerequisite: None.			
<b>T-PHY 102 Physics: Work, Energy, Power</b>	3	2	4
The major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, forces, center of gravity, and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas. Prerequisites: T-PHY 101, T-MAT 101.			
<b>T-PHY 103 Physics: Electricity</b>	3	2	4
Basic theories of electricity, types of electricity, methods of production, and transmission and transforming of electricity. Electron theory, electricity by chemical action, electricity by friction, electricity by magnetism, induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of the course. Prerequisites: T-PHY 102, T-MAT 104.			
<b>T-PHY 106 Applied Mechanics</b>	5	0	5
Concepts and principles of statics and dynamics. Parallel concurrent and noncurrent force systems in coplanar and noncoplanar situations. Concepts of centroids and center of gravity, moments of inertia, fundamentals of kinetics, and kinematics of velocity and motion. Prerequisites: T-MAT 103, T-PHY 102.			
<b>PHY 1101 Applied Science</b>	3	2	4
An introduction to physical principles and their application in industry. Topics in this course include measurement; properties of solids, liquids, and gases; basic electrical principles. Prerequisite: MAT 1101.			
<b>PHY 1102 Applied Science</b>	3	2	4
The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry, and principles of force, motion, work, energy, and power. Prerequisite: PHY 1101.			

## POLITICAL SCIENCE

<b>POL 102 Government-National English and Colonial Background</b>	3	0	3
The Articles of Confederation and the framing of the federal constitution. The nature of the federal union; state rights, federal powers, political parties. The general organization and functioning of the national government. Prerequisite: None.			
<b>POL 201 American Federal Government</b>	3	0	3
The study of the origins, development, structure, and functioning of the Federal Government. Prerequisite: None.			
<b>POL 203 Government—State and Local</b>	3	0	3
A study of state and local government, state-federal interrelationships, the functions and prerogatives of the branches. Problems of administration, legal procedures, law enforcement, police power, taxation, revenues and appropriations. Special attention will be given to North Carolina. Prerequisite: None.			

## PSYCHOLOGY

<b>T-PSY 112 Personality Development</b>	3	0	3
Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement. Prerequisite: None.			
<b>PSY 201 Introduction to Psychology</b>	3	0	3
The introductory study of psychology. The course includes the study of principles of behavior in the areas of motivation, perception, learning, intelligence, and the organization of personality.			
<b>PSY 202 Educational Psychology</b>	3	0	3
An analysis of the processes important in learning. Major concepts in thinking, learning, and development are emphasized. Special attention is given to measurement, guidance, materials and learning situations. Prerequisite: PSY 201.			
<b>PSY 203 Adolescent Psychology</b>	3	0	3
An elementary consideration of the physical, intellectual, social, and emotional changes expected during adolescence. Prerequisite: PSY 201.			
<b>T-PSY 206 Applied Psychology</b>	3	0	3
A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings and emotions are considered with particular reference to on-the-job problems. Other topics investigated are: employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community. Prerequisite: None.			
<b>PSY 210 Human Growth and Development</b>	3	0	3
A study of the interaction of maturational and environmental factors in the growth of the individual from conception to maturity.			
<b>PSY 1101 Human Relations</b>	3	0	3
A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation. Prerequisite: None.			

## RECREATION

<b>REC 101 Introduction to Recreation Services</b>	3	0	3
This course introduces the student to the historical and philosophical foundation of recreation and leisure. The basic principles, the definition, and the impact and trends of recreation are presented. Emphasis on the different agencies providing recreational services will be included with visitations being scheduled to public, private, industrial, and institutional recreational programs. Prerequisite: None.			
<b>REC 102 Introduction to the Ill &amp; Handicapped</b>	3	0	3
This course is designed to introduce the student to the exceptional or abnormal person. It is the purpose of this course to develop a general knowledge of the different handicapping conditions, their causes, and limitations			

caused by the disability. To aid the students' understanding scheduled trips to institutions for the retarded, mentally ill, deaf, and physically handicapped will be an integral part of the course. Prerequisite: None.

<b>REC 103 Adaptive Physical Education &amp; Recreation</b>			
<b>Activities</b>	<b>3</b>	<b>0</b>	<b>3</b>

This course is the study of modifications and adaptations used in recreation and physical education activities for handicapped persons. Discussions and demonstrations of techniques and equipment used in adapting various sports, games, and other activities to fit the limitations of the handicapped will be incorporated into this course. Students will have the opportunity to observe adaptations for the mentally ill and retarded, blind, the elderly, physically handicapped and other special groups. Prerequisite: None.

<b>T-REC 104 The Rehabilitation Team</b>	<b>3</b>	<b>0</b>	<b>3</b>
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This course is designed to aid the students' understanding of the professional workers composing a treatment team and their relationships to each other. The majority of instruction time will be centered around guest speakers from the different professions. Professions to be represented include medicine, social work, psychology, physical therapy, education, rehabilitation services, recreation and others. Trips to local institutions will also be planned. Prerequisite: REC 102.

<b>REC 105 Recreation Areas &amp; Facilities, &amp; Program Planning</b>	<b>3</b>	<b>0</b>	<b>3</b>
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This course explores the different types of indoor and outdoor recreational areas and facilities and their use. The principles in planning, the dimensions and standards, maintenance, and the operation of areas and facilities, such as parks, playgrounds, ball fields, centers, tennis courts, swimming pools, and others will be studied. This course also explores the principles of planning and organizing an effective recreation program. Consideration will be given to various aspects of program planning with special attention being focused on the types of programs offered to the handicapped participant. Prerequisite: None.

<b>REC 106 Resident and Day Camp Administration</b>	<b>3</b>	<b>0</b>	<b>3</b>
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This course is designed to develop an understanding of the operation of a camping program. Particular course emphasis will be placed on camping for the ill and handicapped, and the architectural barriers which often exist. Operational concerns, varying from the use of volunteers to the maintenance of grounds, will be covered in this course. Local, private and institutional camps will be visited as part of the course.

<b>REC 107 Team Sports and Games in Recreation</b>	<b>1</b>	<b>4</b>	<b>3</b>
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This activity course is devised to develop the students' knowledge and ability in team sports and games. The rules and regulations, field dimensions, equipment and safety factors will be studied. Activities for groups of different ages and abilities will be presented. Student participation will be utilized in softball, flag football, soccer, basketball, volleyball, relays, and other team sports and events. Prerequisite: None.

<b>T-REC 108 Medical Terminology and Basic Anatomy</b>	<b>3</b>	<b>0</b>	<b>3</b>
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This course is designed to build a workable medical vocabulary for the recreational therapist. Terminology commonly used in the medical setting will be presented. The different systems of the body will be studied in connection with terminology. Prerequisite: None.

<b>REC 109 First Aid and Safety</b>	<b>3</b>	<b>0</b>	<b>3</b>
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It is important for the recreation leader to have an understanding of first aid and safety procedures, especially when handicapped persons are involved. This course presents the skills, techniques, and knowledge needed to have a safe environment. Adequate class time will be reserved for practical demonstrations of first aid and safety.

<b>T-REC 110 Recreational Arts and Crafts</b>	<b>1</b>	<b>4</b>	<b>3</b>
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This skill course is designed to develop specific talents in recreational arts and crafts. The methods, materials and techniques for teaching arts and

	Hours Class	Per Week Lab	Quarter Hours Credit
crafts to children and adults will be presented with special emphasis on projects for the handicapped. Skill areas to be taught will be pottery, creative art, leather craft, ceramics, copper tooling, mountain crafts, and others including camp crafts.			
<b>REC 121 Social Recreation</b>	3	0	3
The purpose of this course is to develop skill in planning social recreational activities. Party planning, special events, social games, quiet games, trips and picnics, and decorating will be emphasized in this course. For practical experience, students will have the opportunity to work with different age groups on community projects in social recreation.			
<b>REC 201 Recreation Administration</b>	3	0	3
This course is designed to introduce the student to basic principles and concepts of recreation administration. Primary emphasis will be on the administration of hospitals and municipal recreation programs. Administrative concerns in personnel management, public relations, budgeting and finance, and legislation will be presented.			
<b>REC 202 Recreation Leadership</b>	3	0	3
Basic skills in working with people is an important asset to the recreation leader who daily works with program participants, volunteers, staff, and the public. This course focuses on the types of leadership, parliamentary procedure, role playing, interviewing, training and recruiting volunteers, and human relations. Students will have the opportunity to observe community leaders and to evaluate their effectiveness.			
<b>REC 203 Water Related Sports and Activities</b>	1	4	3
This course is intended to develop an understanding of the values, objectives, and skills involved in a swimming and water sports program. Particular attention will be given to swimming and water activities for the handicapped. The organizational and administrative aspects of a swimming program, teaching progressions and methods, and water games will be included. The water skills will be taught at a local pool. Prerequisite: None.			
<b>REC 204 Individual Sports and Games</b>	1	4	3
This activity course is designed to develop the student's ability and understanding of individual sports and games. The student will be given class instruction on the proper techniques, rules, and equipment with emphasis on adapting the activity to the abilities of the handicapped. Sports and games to be included are bowling, golf, archery, badminton, and tennis. Prerequisite: None.			
<b>REC 205 Nature and Outdoor Recreation</b>	3	0	3
The purpose of this course is to acquaint the student with recreation and its relationship to our natural resources. Attention will be focused on conservation, wildlife, nature, projects for all seasons, and other outdoor activities. Planning a nature and outdoor recreation program for the handicapped will also be stressed. Local points of interest will be visited. Prerequisite: None.			
<b>T-REC 206 Recreational Drama</b>	1	4	3
This activity course explores the use of drama in a recreational setting. Particular attention is placed upon the type of drama activities which can be used effectively with handicapped children and adults. Creative activities such as pantomime, plays, stunts and skits, charades, story-telling, and costuming will be part of this course. In order to develop skill in drama, student participation will be encouraged. Prerequisite: None.			
<b>T-REC 207 Practicum</b>	0	6	2
Student filed assignments in the municipal and hospital recreation settings will begin in the third quarter of the Recreational Therapy Technology Curriculum. The field placement is designed to give the student practical experience while undertaking his academic work. The student will be under the direction of a full-time recreation professional. Evaluation reports of the field work will be submitted by the student and the professional. Prerequisite:			

	Hours Class	Per Week Lab	Quarter Hours Credit
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Two quarters of study in Recreational Therapy Technology is required before any on-the-job training is permitted.

<b>T-REC 208 Practicum</b>	0	6	2
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Students will be placed in a setting different from the setting of the previous quarter. Six hours of field work per week will be required. This work will be under the supervision of a professional worker in a specific area of interest.

<b>T-REC 209 Practicum</b>	0	9	3
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Nine hours of field placement will be required during the fifth quarter of the recreational therapy curriculum.

<b>T-REC 210 Practicum</b>	0	15	5
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The sixth quarter of the Recreational Therapy Curriculum will primarily be consumed with practical work experience in the student's chosen area of interest. (15) hours of field work or two days per week will be devoted to on-the-job training. This placement will be under the direction of a full-time professional.

## SOCIAL SCIENCE

(No Prerequisites)

<b>T-SSC 201 Government and the Citizen</b>	3	0	3
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A study of government with emphasis on basic concepts, structure, powers, procedures and problems. The relation and significance of governmental processes to the individual citizen is also stressed.

<b>T-SSC 202 Contemporary Problems</b>	3	0	3
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A study of the major problems of modern society, such as the position of minority groups in society and the problems associated with industrial and urban development. The course will also be involved in problems as they arise during the quarter, and will therefore be loosely structured to accommodate current events.

<b>SSC 205 American Institutions</b>	3	0	3
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A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker. The course dwells upon current local, national, and global problems viewed in the light of our political and economic heritage. Prerequisite: None.

<b>T-SSC 206 Applied Psychology</b>	3	0	3
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A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings, and emotions are considered with particular reference to on-the-job problems. Other topics investigated are: employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community.

<b>SSC 1101 Human Relations</b>	3	0	3
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A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.

## SPANISH

<b>SPA 101, 102, 103 Elementary Spanish</b>	3	2	3
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A study of the basic elements of Spanish. Fundamentals of grammar; drill in pronunciation, reading, and special emphasis on oral expression in the

language. This sequence of courses is designed for students with less than two units of high school Spanish.

**SPA 201, 202, 203 Intermediate Spanish** 3 2 3

An intermediate Spanish sequence designed to provide a systematic review of basic grammar and to develop the ability to read with comprehension material dealing with Spanish Civilization. Prerequisite: SPA 103 or two high school units of Spanish.

**SPA 211, 212, 213 Advanced Spanish** 3 2 3

A sequence of courses conducted in the language, stressing the culture and history of Spanish, principally as reflected in the literature. Emphasis on advanced composition and reading of selections from Spanish literature. Prerequisite: SPA 203.

## SPEECH

**SPH 101 Fundamentals of Speech** 3 0 3

The study and practice of oral communication. Emphasis is upon elementary physiology of speech, basic speech skills, speech composition, preparation, and presentation. Prerequisite: None.

## SOCIOLOGY

**SOC 201 Introduction to Sociology** 3 0 3

A study of the fundamental principles and concepts of sociology, with emphasis on contemporary American Institutions in relation to technological change, ethnic groups, population trends, and social control.

**SOC 205 Marriage and the Family** 3 0 3

The study of family relationships, its forms and functions. Included in the study are marital choice; sex roles; socialization; organization and functions of the American family.

**T-SOC 207 Rural Society** 3 0 3

A study of selected elements of rural sociology with emphasis on current social changes. The course provides a sociological background for the understanding of rural social changes. Areas of study include rural culture, group relationships, social classes, rural and suburban communities, farm organizations, the communication of agricultural technology, rural social problems, agricultural adjustment and population change. Prerequisite: None.

## SURGICAL

**SUR 1101 Principles of Operating Room Technique** 9 6 11

An introductory course devoted to developing an understanding of the principles of operating room techniques and acquiring fundamental skills essential to assisting in the operating room. Instruction includes environmental and personal orientation; weights and measures; anesthesia; operating room procedures; operating room techniques; operating room personnel duties and ethical, moral, and legal responsibilities. Laboratory exercises are designed to provide practice and skill development. Prerequisite: None.

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>SUR 1102 Anatomy and Physiology</b>	6	4	8
A thorough study of the general plan of the body and the nine systems: nervous, circulatory, respiratory, muscular, skeletal, digestive, urinary, reproductive, and endocrine. The course is designed to acquire an understanding of how the body controls its functions, how the body stands erect and moves, how the body distributes food and oxygen and removes waste, and how the body provides for reproduction. Prerequisite: None.			
<b>SUR 1103 Microbiology</b>	4	1	4
An introductory course devoted to developing an understanding of micro-organisms as they relate to the operating room and the patient's recovery from surgery. Laboratory exercises are designed to use the microscope, to operate a sterilizer, to disinfect an operating room, and to conduct a septic case. Prerequisite: None.			
<b>SUR 1104 Surgical Procedures</b>	10	0	10
A thorough study of important surgical procedures related to the nine systems: nervous, circulatory; respiratory, muscular, skeletal; digestive; urinary; reproductive, and the endocrine. The course includes the use of radium. Instruction includes the use of special instruments and equipments as they relate to each procedure. Prerequisites: SUR 1101, SUR 1102, SUR 1103.			
<b>SUR 1105 Clinical Practice</b>	0	20	10
Applied practice in handling instruments, threading of suture, and operation of special equipment during an operative case. Instruction includes practical experience. Prerequisites: SUR 1101, SUR 1102, SUR 1103.			

## TEXTILES

<b>TEX 1101 Yarn Manufacturing I</b>	3	3	4
A basis study of the function of yarn manufacturing. Emphasis is placed on yarn manufacturing with study of flow systems, functions of each machine and machine part, and the introduction of basic calculations related to yarn manufacturing. Yarn numbering is included. Laboratory exercises to supplement lectures are included. Prerequisite: None. Corequisite: TEX 1104, MAT 1101.			
<b>TEX 1104 Textiles Fibers</b>	2	2	3
A study of the physical, chemical and aesthetic properties of the major natural and man-made textile fibers. Included are methods of measuring properties, influence of fiber moisture regain on physical properties, and processing characteristics. Fiber identification by laboratory analysis is included. Prerequisite: None.			
<b>TEX 1106 Weaving</b>	2	3	3
An introduction to the study of woven fabrics. The methods of preparing yarns for weaving, the weaving of fabrics, and the necessary calculations to produce a woven fabric are included. Laboratory exercises in the operation of the looms supplement the lectures. Prerequisite: TEX 1104. Co-requisite: TEX 1108.			
<b>TEX 1108 Yarn Manufacturing II</b>	5	6	7
A continuation of TEX 1101, including blending methods, effectiveness and influence on end product. Twist in its many ramifications, spinning limits; drafting methods, types and limits. Packaging, production, and the determination of mill balance are discussed. Conventional and new developments in manufacturing concepts are included. Special yarn preparation systems are reviewed. Laboratory periods are used to supplement lectures. Prerequisites: TEX 1101, MAT 1101.			

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>TEX 1110 Knitting</b>	3	3	4
A study of the selection and preparation of knitting yarns, knitting mechanisms and the structure of different types of spring and latch needle fabrics. The operation and adjustment of the basic types of knitting machines are included in this course. Laboratory exercises are included. Prerequisite: TEX 1108.			
<b>TEX 1115 Textile Testing</b>	3	3	4
This course includes Physical Textile Testing. The Physical Testing includes the methods and techniques of testing fibers, laps, roving, yarns and fabrics made from natural and synthetic fibers. Standard A.S.T.M. method and practices for the testing of textile materials are followed and a study is made of the various machines and apparatus employed in standard testing laboratories. Prerequisites: TEX 1108, TEX 1106.			
<b>TEX 1120 Fabric Design and Analysis</b>	3	3	4
A study of the fundamental principles of fabric structure. It includes the study of the three basic weaves, plain, twill, and satin plus many of their derivatives. Instruction in fabric analysis techniques and the use of laboratory instruments for the determination of fabric construction details is included. Prerequisites: TEX 1108, TEX 1106.			

## UPHOLSTERY

<b>UPH 1111 Upholstery Materials and Methods I</b>	1	11	5
Includes history and periods of furniture; tools and equipment; hammer technique; staple gun techniques; spring up methods; webbing and burlap application.			
<b>UPH 1112 Upholstery Materials and Methods II</b>	1	11	5
A course in styles of furniture; basic upholstery methods; upholstering tight-seat and simple type chairs.			
<b>UPH 1113 Upholstery Materials and Methods III</b>	1	11	5
Offers practice in upholstering loose cushion sofas and chairs; inside and outside upholstering; application of skirts and trim; upholstery of traditional furniture; hand tufting and piping.			
<b>UPH 1114 Upholstery Sewing I</b>	1	11	5
Includes a study of upholstery sewing; basic operations of the sewing machine; simple sewing techniques.			
<b>UPH 1115 Upholstery Sewing II</b>	1	11	5
Covers advanced upholstery sewing, sewing matched stripes, making patterns and other sewing techniques.			
<b>UPH 1116 Upholstery Cutting I</b>	1	11	5
Job experience is devoted to basic cutting techniques; how to measure frames; cutting with shears; lay cutting.			
<b>UPH 1117 Upholstery Cutting II</b>	1	11	5
Includes how to make patterns, cut matched patterns; line up and cut stripe patterns.			

## WELDING

<b>WLD 1101 Basic Gas Welding</b>	0	3	1
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Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for bronze welding, fusion welding, fillet welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work. Prerequisite: None.

<b>WLD 1112 Mechanical Testing and Inspection</b>	1	3	2
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The standard methods of mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality and economy of the weld. Types of tests to be covered are: destructive—free-bend, guided-bend, nick-tear, notched-bend, tee-bend; nondestructive—V-notch, Charpy impact, etc. Prerequisites: WLD 1120, WLD 1121.

<b>WLD 1120 Oxyacetylene Welding and Cutting</b>	3	13	7
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Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of units. Welding procedures such as practice in puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed through the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds. Prerequisite: None.

<b>WLD 1120-1 Oxyacetylene Welding and Cutting</b> (Part time)	2	6	4
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<b>WLD 1120-2 Oxyacetylene Welding and Cutting</b> (Part time)	2	6	4
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<b>WLD 1121 Arc Welding</b>	3	12	7
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The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized throughout the course in the use of tools and equipment. Prerequisite: None.

<b>WLD 1121-1 Arc Welding (Part Time)</b>	2	6	4
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<b>WLD 1121-2 Arch Welding (Part Time)</b>	2	6	4
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<b>WLD 1122 Commercial and Industrial Practice</b>	3	9	6
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Designed to build skills through practices in simulated and actual industrial processes and techniques: sketching and layout out on paper the size and shape description, listing the procedure steps necessary to build the product and estimating time and material and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding, and nondestructive tests and inspection. Prerequisites: WLD 1120, WLD 1121.

<b>WLD 1123 Inert Gas Welding</b>	1	3	2
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Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and semi-automatic welding. Prerequisites: WLD 1120, WLD 1121.

	Hours Class	Per Week Lab	Quarter Hours Credit
<b>WLD 1124 Pipe Welding</b>	3	12	7
Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding, processes according to Sections VIII and IX of the ASME code. Prerequisite: WLD 1121.			
<b>WLD 1124-1 Pipe Welding (Part time)</b>	2	6	4
<b>WLD 1124-2 Pipe Welding (Part time)</b>	2	5	4
<b>WLD 1125 Certification Practices</b>	3	6	5
This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds. Prerequisites: WLD 1120, WLD 1121, WLD 1123, WLD 1124.			
<b>WLD 1129 Basic Welding</b>	2	3	3
Basic characteristics of metals, equipment, its construction and operation are presented by means of audio-visuals and other educational media. Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating gas and arc welding equipment. Practice will be given in surface welding; bronze welding, silver-soldering, and flame-cutting and arc welding methods applicable to mechanical repair work. Prerequisite: None.			
<b>WLD 1130 Intermediate Welding</b>	1	3	2
Welding instruction and shop demonstrations in modern welding methods used by mechanics to fabricate steel and to maintain the equipment. The student learns procedures and techniques of joining frame members, supporting members, struts, braces, and other parts according to approved practices. Prerequisite: WLD 1129.			









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